

POPULATION SURVEY OF THE INTERIOR LEAST TERN
ON THE MISSISSIPPI RIVER
FROM
CAPE GIRARDEAU, MISSOURI
TO
BATON ROUGE, LOUISIANA

2009

By

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On and between July 11 and July 17, 2009, a survey crew, assembled by Kenneth H. Jones, Associate Professor of Biology at Dyersburg State Community College, under contract with Choctaw Transportation Company, conducted a survey of interior Least Tern (*Sternula antillarum athalassos*) nesting colonies along the Mississippi River. This annual survey is performed for the Memphis District Army Corps of Engineers and assists the U.S. Fish and Wildlife Service with its census in determining population size and distribution of the Interior Least Tern. This survey was the 25th consecutive annual count since the surveys were initiated in 1985 by the Army Corps of Engineers. The survey area extended 777 miles from Cape Girardeau, Missouri (Upper River Mile 53) to Baton Rouge, Louisiana (River Mile 230) (Figure 1). In prior years three types of surveys were performed: towboat, aerial and small boat (Table 4, Figure 2). The towboat surveys were discontinued in 1995 as were the aerial surveys in 1997 when it became obvious that of the three, the small boat survey yielded the highest and most accurate counts. Past years' surveys terminated about 7 miles downstream of Vicksburg, Mississippi because early aerial surveys in 1986 indicated a scarcity of sandbars and relatively few terns downstream of Vicksburg. Beginning in 2004 the survey was extended to Baton Rouge, Louisiana in order to more thoroughly access the entire range of the Least Tern population on the Lower Mississippi River.

From 1985 through 1996, Least Tern surveys were conducted by John Rumancik, fishery and wildlife biologist from the Memphis District Army Corps of Engineers. Since 1997 the surveys have all been conducted by Kenneth Jones, Associate Professor of Biology, Dyersburg State Community College. Observers and crew members of this year's survey included Mike Thron, biologist with the Memphis District Army Corps of Engineers and John Rumancik, retired biologist with the Memphis District Corps of Engineers. Experienced counters from past surveys helping on this year's count included Jimmy and Leila Boyd, Mark Campen, Dennis Davin, Zack Fowlkes, Jack Grubaugh, Professor of Biology, University of Memphis.

This year's survey yielded a total count of 9,516 Least Terns and 78 nesting colonies, more colonies than last year's survey, which was 62, but less in total numbers. Forty-six colonies were identified based on the presence of eggs and/or chicks (Tables 1 and 2). Thirty-two colonies were identified based on the presence of a large number of nest scrapes, adult behavior and other indicators of likely reproductive effort such as wetting breast feathers, sitting inland, carrying fish or intense mobbing of intruders. The largest colony was located at Corregidor Dikes (RM 503.0) with 800 adult terns counted. Other large colonies included Island

#84 Dikes (RM 533.4) with 650 birds, Prairie Point Dikes (RM 665.6) with 423, and Seypell Dikes Upper (RM 706.5) with 400 Least Terns. The smallest colonies were at Above Loosahatchie Dikes (RM 743.2), and Togo Island Dikes Lower (RM 414.3), with just 9 and 12 birds.

Numbers of adult and juvenile Least Terns were recorded on data sheets developed by the Corps and based on the Cornell University Bird Registry Form. One data sheet was used for each observation with the following noted: date, time, river mile, latitude/longitude (decimal degrees determined from GPS), number of adult terns, presence of juveniles, chicks and eggs, number of nests observed and eggs or chicks in each, locations of sandbars, substrate, distance from vegetation and type, weather conditions, nearest river gage readings, and other notes on bird behavior, signs of predation or other disturbance. Nest counts were determined both by direct observation of scrapes containing eggs (empty scrapes were not counted) or observations of terns sitting inland during waterline drift counts. Foraged fingerling fish dropped within the colony were identified and/or collected. Colony locations were marked on 2007 Flood Control and Navigation Maps of the Mississippi River, 62nd edition, USACE, from Cairo, Illinois south and 1998 Flood Control and Navigation Maps of the Mississippi River, 61st edition, USACE, above Cairo, Illinois. Data sheets and colony locations are found in Appendix A.

The average number of adult terns per colony was 122, with colony sizes ranging from as little as 9 adults to as many as 800. The numbers of eggs per nest ranged from 1 to 3 and many nests were associated with debris wrack lines or in close proximity to small, random pieces of drift. Many adults were observed utilizing other habitats often miles away from the nearest colony locations. These habitats included both still and running water of all depths in the channel, behind dikes, in back chutes, tributary mouths, and fast current against revetted banks on the outside of river bends.

The boat survey was initiated July 11, 2009, with the river stage at Memphis, Tennessee at 10.2 and falling (Table 3). For the entire duration of the survey, the river was on a steady fall, averaging around 1 foot per day. The survey proceeded downstream during daylight hours from Cape Girardeau, Mo., to Baton Rouge, La., at an average pace of 111 miles per day.

Upon spotting a likely colony site, the boat would head for the greatest concentration of terns, then approach the bar as close as shallow water levels would allow, cut power, and motor slowly with the current along the perimeter of the bar. Two or more observers would count birds using 7x35 or 8x40 binoculars. One observer counted terns resting along the waterline, while another observer counted birds in the air or sitting inland, presumably on nests. Usually after this preliminary count, and depending upon the sand bar configuration, the boat would go back and beach near the greatest concentration of terns and one or more observers would then walk toward the perceived center of the colony to find evidence of nesting activity, while others would fan out in different directions to traverse more of the colony area. This technique, counting as the boat proceeds downstream (hereafter referred to as a “perimeter count”), usually produced higher counts than just walking on the sand bar to the colony’s center to induce mobbing (hereafter referred to as a “flush count”). It was particularly effective at colonies where terns were dispersed for several miles along the waterline and the sand bar was low enough that the observers could see across it. However, at many sites, especially those with back chutes with

shores not visible from the boat on the channel side, it should be construed that many terns were not seen and the counts were conservative. All individual counts were recorded privately so as not to influence other crew members' observations, then compared and counts discussed. All individual observer counts were recorded on data sheets. The highest number was discarded and the 2nd highest number was recorded as the total count, unless two or more observers had identical high counts. In most cases all observers were within 10% or less of the recorded count.

The presence of eggs or chicks was considered confirmation of nesting activity. Intense mobbing, wetting of breast feathers, and the presence of fresh scrapes were also considered to indicate an active nest colony at the 32 sites where no eggs or chicks were observed. Once a colony was located, several counts were made, both by observers stationed at the boat and those penetrating the colony. No colonies were found to contain fledged juveniles. Not all colonies were walked by members of the survey party, especially if the colony was widely dispersed and easily observed from the boat. In those instances, even though no eggs were observed, terns seen sitting higher up on the sand bar, away from the waterline, were counted as indicative of number of nests. This assumption produced the larger nest count totals up to 200, as shown in Table 1.

As with previous surveys, observations within the colony were performed as quickly as possible (< 15 minutes) to minimize the disturbance time and limit the exposure of any chicks and eggs to the intense summer heat. Though mobbing behavior was often intense upon the observers first entering the colony, it ceased almost immediately as soon as the observers retreated. The highest counts usually occurred during the initial waterline count or upon the first few minutes of mobbing when most, if not all, of the adults in the colony would join in to dissuade the intrusion. Nesting adults, nest scrapes, and numbers of nests with eggs and chicks were recorded as well as other features of the habitat. Nine Thousand five hundred sixteen (9,516) Least Terns were recorded at 110 locations (Table 1, Figure 1). Of these, 78 sites were identified as nesting colonies with 8,875 adults, 15 sites as resting bars only with 407 adults, and 17 observations were of 234 birds that could not be associated with colonies, either flying over feeding areas or in transit along the river.

As with previous years, the typical tern nest colony was located on an unattached (surrounded by water) sand and/or gravel bar usually associated with a dike field. Those colonies that were attached were located on very large, remote point bars, ½ to 1 mile in width, and often 2 to 4 miles in length. Isolation and remoteness appeared to be the main selection criteria. The larger colonies were hundreds of acres in size, while some of the smallest were just a few acres or less.

The locations of the colonies as indicated on the 1998 and 2007 Navigation Maps (Appendix A-I) should be viewed as only approximations based on river mile markers visible from or nearby the sites. Since many sand and gravel bars do move or change shape often, such features on the maps do not necessarily correspond to the actual conditions at the time of the survey (hence the occasional colony indicated in open water). For exact colony locations the GPS latitude/longitude coordinates (decimal degrees) are the most accurate and should be referenced as occurring at the water's edge on the channel side of the colony (except when specified otherwise on the data sheets). Most colonies were located on the high centers or

distributed evenly across the bars showing no preference for river vs. chute sides, though there were some exceptions.

The colonies' proximities to the nearest water (least distance from any nest with eggs to the waterline) varied from 20 to 1300 feet and averaged ~240 feet. Though some colonies were densely populated, with scrapes occurring within a few feet of each other, many more colonies were extremely dispersed with nests occurring hundreds of feet apart and the colony extending as far as a mile or more across the larger sandbars. Major vegetation was absent or far removed (>300 feet) from 72 colony sites, but 6 did have sparse stands of sapling Cottonwoods (*Populus deltoids*) and/or Black Willows (*Salix nigra*) within 300 feet of active nests. The other colonies with vegetation had only very sparse, recently emerged grasses, sedges and forbs in small patches within the colony. Most open water within 2 miles of active colonies appeared to be utilized by foraging terns. These sites included swift current on revetted outside bends, slack water between dikes, chutes, mouths of tributaries and even mid-channel currents.

Recent evidence of predation on tern eggs was noted at 1 colony site, by coyotes or dogs. The presence of coyote, and/or dog tracks was noted at 6 sites and still suggests that coyotes and/or feral/pet dogs are one of the more common predation threats to nesting Least Terns along the Lower Mississippi River. Of 78 colonies, 13 had track evidence of recent intrusion by humans on foot, by boats and ATVs. In 1 colony there were day campers present at the time of the survey date, but with most limiting their activities to the water line.

Besides Coyotes (*Canis latrans*) and dogs, other potential predators, or their sign, seen near colonies during this year's survey included American Crow (*Corvus brachyrhynchos*), Armadillo (*Dasypus novemcinctus*), Bald Eagle (*Haliaeetus leucocephalus*), Egrets (*Casmerodius*, *Egretta*, *Bubulcus*), Fox (*Urocyon* or *Vulpes*), Great Blue Heron (*Ardea herodias*), Mississippi Kite (*Ictinia mississippiensis*), Raccoon (*Procyon lotor*), Red-tailed Hawk (*Buteo jamaicensis*), and Turkey Vulture (*Cathartes aura*).

Other noteworthy bird species observed on the sand bars or in close proximity to Least Tern colonies included American avocet (*Recurvirostra americana*), Anhinga (*Anhinga anhinga*), Bank Swallow (*Riparia riparia*), Barn Swallow (*Hirundo rustica*) Belted Kingfisher (*Megasceryle alcyon*), Black-necked Stilts (*Himantopus mexicanus*), Black Tern (*Chlidonias niger*), Black Vulture (*Coragyps atratus*), Canada Goose (*Branta canadensis*), Caspian Tern (*Sterna caspia*), Cattle Egret (*Bubulcus ibis*), Common Grackle (*Quiscalus quiscula*), Double-Crested Cormorant (*Phalacrocorax auritus*), Forster's Tern (*Sterna forsteri*), Great Blue Heron (*Ardea herodias*), Great Egret (*Casmerodius albus*), Hudsonian Godwit (*Limosa haemastica*), Indigo Buntings (*Passerina cyanea*), Killdeer (*Charadrius vociferous*), Little Blue Heron (*Egretta caerulea*), Mallard Duck (*Anas platyrhynchos*), Pied-billed Grebe (*Podilymbus podiceps*), Purple Martin (*Progne subis*), Red-winged Blackbird (*Agelaius phoeniceus*), Ring-billed Gull (*Larus delawarensis*), Rough-winged Swallow (*Stelgidopteryx serripennis*), Sandpipers (*Calidris* sp.) Snowy egret (*Egretta thula*), Cliff Swallow (*Petrochelidon pyrrhonota*), White Ibis (*Eudocius albus*), White Pelican (*Pelecanus erythrorhynchos*) and Wood Stork (*Mycteria americana*).

Fingerling-size shad (*Dorosoma*), and Silver Carp (*Hypophthalmichthys molitrix*), were found in colonies and are presumed to have been dropped by foraging adults. This year's survey yielded a total count (9,516) that was down from the 2008 count (12,183) by roughly 22%.

Table 1: Least Tern Survey - July 11 - July 17, 2009 - Mississippi River
Cape Girardeau, Missouri, to Baton Rouge, Louisiana

River Mile	Mississippi River Location	State	Lat. N	Long. W	Least Terns	Nests	
RIVER MILE:	SITE NAME:	State	Latitude:	Longitude:	Adults:		Nests:
UR 30.8	Bumgard Island	IL	37.04192	89.37755	76	C*	4
946.0	Island #1 Dikes	KY	36.88810	89.11768	133	C*	6
940.0	Below Campbell Dikes	KY	NA	NA	4		0
931.2	Wolf Island Bar	KY	36.70052	89.14998	180	C*	10+
929.7	Williams Landing	KY	36.68500	89.14788	80	C*	7
924.8	Beckwith Bend	KY	NA	NA	5		0
920.5	Hickman Bend	MO	35.56013	89.24342	209	C*	2
909.0	Mable Landing	KY	36.54803	89.39751	243	C*	7
884.0	Kentucky Point Dikes	KY	36.51769	89.55204	312	C*	10+
876.0	Marr Towhead	TN	36.42100	89.53786	38	*	3
871.5	Stewart Towhead Dikes Upper	MO	36.36334	89.51280	72	*	50
870.0	Stewart Towhead Dikes Lower	MO	36.35266	89.51883	62	*	0
863.5	Below Cherokee Dikes	TN	36.32014	89.61528	31		0
857.0	Chute of Island 14	MO	36.24564	89.57816	250	C*	10+
846.3	Opp. Caruthersville Dikes	TN	NA	NA	7		0
837.0	Island #18 Towhead Dikes	TN	36.09847	89.66160	92	*	2
830.0	Island #20 Dikes	TN	NA	NA	6		
826.6	Head of Island #21 Dikes	TN	35.97324	89.71639	53	*	5
825.3	Island #21	TN	35.96161	89.70854	45	C*	3
819.4	Wrights Point Dikes	AR	35.90662	89.64791	66	C*	1
812.0	Below Tamm Bend Dikes	TN	35.89874	89.75754	40	*	2
807.4	Nebraska Point Dikes	TN	35.85873	89.75853	353	C*	10+
803.0	Bend of Island 25	AR	NA	NA	6		0
794.2	Ashport Gold Dust Dikes	AR	35.74818	89.82543	40	*	10
787.0	Keyes Point Dikes	TN	NA	NA	9		0
781.2	Below Plum Point Dikes	TN	35.65164	89.89279	160	C*	1
775.3	Sunrise Towhead Chute	TN	35.57951	89.90346	23	*	5
771.0	Randolph Dikes	TN	NA	NA	9		0
766.2	Below Richardson Landing Dikes	TN	35.52419	89.98331	81	C*	6
760.0	Cedar Point	TN	35.43558	89.99867	46	*	4
754.5	Densford Bar	TN	35.39468	90.06695	82	C*	1

SUBTOTAL

2,813 23

Table 1 continued: Least Tern Survey - July 11 - July 17, 2009 - Mississippi River
Cape Girardeau, MO, to Baton Rouge, LA

River Mile	Mississippi River Location	State	Lat. N	Long. W	Least Terns		Nests
RIVER MILE:	SITE NAME:	State	Latitude:	Longitude:	Adults:		Nests:
743.2	Above Loosahatchie Dikes	TN	35.24930	90.09153	9	C*	3
740.5	Sycamore Chute Dikes	AR	35.20764	90.07227	70	*	0
733.0	Engineers Bar Dikes	AR	35.12364	90.10428	23	*	0
729.5	Vice Presidents Island #46	TN	35.12428	90.15978	66	C*	5
725.0	Dismal Point Dikes	AR	35.06910	90.18380	4		0
716.3	Cow Island Bend	MS	35.01221	90.28744	229	C*	7
710.5	Cat Island Dikes	MS	NA	NA	2		0
706.5	Seyppel Dikes Upper	AR	34.89416	90.26083	400	C*	55+
705.2	Seyppel Dikes Lower	AR	34.88873	90.28032	110	C*	10+
702.8	Pickett Dikes	AR	34.87374	90.31387	48	C*	15
699.0	Basket Bar Dikes	AR	NA	NA	15		0
692.3	Rabbit Island	MS	34.81047	90.46430	50	*	5
686.5	Mhoon Bend	AR	34.73556	90.45821	32	*	0
680.3	Bordeaux Point Dikes	MS	34.73318	90.56069	5		0
676.0	Below Walnut Bend Dikes	AR	34.67530	90.57420	40		0
672.1	St. Francis Bend	MS	34.62107	90.58377	150	C*	4
668.8	Prairie Point Dikes	AR	34.56587	90.55711	423	C*	1
656.0	Montezuma Towhead Dikes	AR	NA	NA	33		0
652.8	Friars Point Dikes	MS	34.37618	90.65429	31		0
647.9	Kangaroo Point Dikes Upper	AR	34.36700	90.70734	47	C*	10+
646.5	Kangaroo Point Dikes Lower	AR	34.36770	90.71630	33	*	3
643.4	Old Town Bend	MS	34.35226	90.76402	18	C*	2
640.3	Island #62 Dikes Upper	AR	34.30482	90.73929	92	C*	10+
637.3	Island #62 Dikes Lower	AR	34.27662	90.76811	15		0
629.5	Island #64 Dikes	AR	34.21799	90.84954	70	C*	10+
625.3	Sunflower Cut-Off Upper	AR	34.17692	90.89412	47	C*	9
624.7	Sunflower Cut-Off Lower	AR	34.16903	90.90265	83	C*	9
623.0	Below Ludlow Dikes	AR	34.16035	90.92811	50	*	5
620.3	Island #67 Dikes Upper	MS	34.12610	90.54300	125	C*	15
612.4	Below Knowlton Dikes Upper	AR	34.03316	90.89326	53	C*	1

SUBTOTAL

2,373 22

Table 1 continued: Least Tern Survey - July 11 - July 17, 2009 - Mississippi River
Cape Girardeau, MO, to Baton Rouge, LA

River Mile	Mississippi River Location	State	Lat. N	Long. W	Least Terns		Nests
RIVER MILE:	SITE NAME:	State	Latitude:	Longitude:	Adults:		Nests:
612.2	Below Knowlton Dikes Lower	AR	34.02794	90.90060	60	C*	4
608.0	Island #70 Dikes	MS	34.02286	90.96428	51	*	3
602.7	Henrico Dikes	MS	33.99450	91.04180	50	*	3
599.6	Smith Point Dikes	MS	33.95934	91.07776	105	*	25
595.1	Victoria Bend Dikes	AR	33.92955	91.01824	64	*	10
589.5	Terrene Dikes	MS	33.85945	91.06670	136	C*	45
583.7	Malone Field Dikes	AR	33.78616	91.05230	62	C*	0
581.0	Cat Island	AR	NA	NA	28		0
579.0	Below Prentiss Dikes	MS	33.75251	91.13266	94	*	5
574.2	Caulk Neck Cut-Off	AR	33.70733	91.17040	50	*	9
569.8	Catfish Point Dikes	MS	33.67964	91.22231	98	C*	0
563.3	Chicot Landing Dikes	AR	33.62811	91.14978	61	*	5
559.0	Choctaw Bar Island	AR	33.58360	91.16700	8		0
553.6	Huntington Point	MS	33.54860	91.22844	18	*	1
550.3	Offutt Landing	MS	NA	NA	19		0
533.4	Island 84 Dikes	MS	33.31903	91.17683	650	C*	10+
528.6	Refuge Dikes	MS	33.26586	91.12115	68	C*	12
526.5	Aconia Chute Dikes	AR	NA	NA	3		0
523.0	Seven Oaks dikes	AR	NA	NA	7		0
519.1	Island #86 Dikes Upper	AR	33.13810	91.09719	24	C*	5
517.5	Island #86 Dikes Lower	MS	33.12731	91.09986	68	*	3
514.0	Leota dikes	MS	33.09130	91.16341	25	*	2
508.5	Cracraft Lower Dikes	AR	33.02516	91.15446	3		0
503.0	Corregidor Dikes	MS	32.95889	91.38900	800	C*	200
499.5	Wilson Point Dikes	LA	NA	NA	4		0
491.3	Baleshed Landing Dikes	MS	32.84701	91.12215	100	*	18
482.3	Ajax Bar Dikes Upper	MS	32.74483	91.14117	91	C*	2
480.0	Ajax Bar Dikes Lower	MS	32.73710	91.11741	375	C*	15
477.0	Point Lookout Dike	LA	NA	NA	2		0
470.0	Arcadia Point Dikes	MS	NA	NA	4		0
461.0	Willow Cutoff Dikes	LA	32.54429	91.10239	75		0
447.3	Marshall Cutoff Dikes	LA	32.40044	901.99691	40	*	2

SUBTOTAL

3,243 22

Table 1 continued: Least Tern Survey - July 11 - July 17, 2009 - Mississippi River
Cape Girardeau, MO, to Baton Rouge, LA

River Mile	Mississippi River Location	State	Lat. N	Long. W	Least Terns		Nests
RIVER MILE:	SITE NAME:	State	Latitude:	Longitude:	Adults:		Nests:
441.5	Yazoo Cut-Off	MS	NA	NA	2		0
428.7	Below Racetrack Dikes	MS	32.24336	90.97723	79	*	22
419.0	Newton Bend Dikes	LA	32.12355	91.03762	35	*	6
415.2	Togo Island Dikes Upper	LA	32.11706	91.10526	45	*	12
414.3	Togo Island Dikes Lower	LA	32.10746	91.10071	15	*	5
409.7	Yucatan Dikes	MS	32.07082	91.07567	67	c*	6
393.0	Bondurant Towhead Dikes	LA	31.89713	91.21048	150	c*	6
390.0	Browns Field Dikes	LA	NA	NA	2		0
383.2	Spithead Towhead Dikes	MS	31.82997	91.34646	50	c*	1
378.0	Waterproof Dikes	LA	NA	NA	7		0
357.4	Carthage Point Dikes	MS	31.51478	91.49639	43		0
349.6	Opposite Warnicott Landing Dikes	MS	31.41997	91.49334	105	c*	50
337.0	Fritz Island Dikes	LA	NA	NA	2		0
329.3	Jackson Point	MS	31.24505	91.64962	130	c*	3
322.0	Homochito Cutoff	LA	31.1742	91.5947	3		0
304.5	Shreves Bar	LA	30.99254	91.64989	185	c*	1
300.5	Hog Point Dikes	LA	30.94092	91.65082	167	*	5
SUBTOTAL					1,087	11	
TOTAL INDIVIDUALS					9,516		
TOTAL SITES					110		
TOTAL COLONIES					78		

c Confirmed chicks or eggs

* Nest colony determined by bird behavior (sitting inland, breasting, carrying fish, etc.)

Table 2: Summary of 2009 Least Tern Survey on the Lower Mississippi River

River Reach	Number of Terns (July 11-17, 2009)
Cape Girardeau, MO, to Cairo, IL URM 50 – RM 954	76
Cairo, IL, to Osceola, AR RM 954 – RM 790	2,327
Osceola, AR, to Helena, AR RM 790 – RM 670	1,663
Helena, AR, to Greenville, MS RM 670 – RM 530	2,674
Greenville, MS, to Vicksburg, MS RM 530 – RM 430	1,691
Vicksburg, MS, to Baton Rouge, LA RM 430 - RM 230	1,085
TOTAL	9,516
River Reach	Number of Colonies
Cape Girardeau, MO, to Cairo, IL URM 50 – RM 954	1
Cairo, IL, to Osceola, AR RM 954 – RM 790	17
Osceola, AR, to Helena, AR RM 790 – RM 670	16
Helena, AR, to Greenville, MS RM 670 – RM 530	24
Greenville, MS, to Vicksburg, MS RM 530 – RM 430	9
Vicksburg, MS, to Baton Rouge, LA RM 430 - RM 230	11
TOTAL	78

Table 3: Gage Readings – Lower Mississippi River

Least Tern Surveys – July,2009
Shaded numbers indicate local stages at time of survey.

Date	Cairo	New Madrid	Caruthersville	Memphis	Helena	Arkansas City	Greenville	Vicksburg	Natchez
July 2	27.0	17.8	20.2	15.4	24.0	23.1	35.1	32.2	41.1
3	25.4	16.3	18.9	13.9	22.6	22.2	34.2	31.4	MSG
4	24.2	14.9	17.7	12.5	21.0	21.2	33.2	30.5	MSG
5	22.9	13.6	16.7	11.1	19.5	19.8	31.8	29.3	MSG
6	23.5	13.2	15.9	10.0	18.0	18.8	30.6	28.0	MSG
7	25.0	14.2	16.3	9.0	16.7	17.3	29.3	26.8	MSG
8	25.7	15.4	17.4	9.0	15.9	16.3	28.0	25.2	MSG
9	25.2	15.5	17.8	9.9	16.1	15.6	27.1	23.7	33.6
10	24.0	14.7	17.3	10.5	16.8	15.4	26.8	22.4	32.0
11	22.0	13.5	16.3	10.2	17.1	15.7	26.8	21.9	30.8
12	21.7	12.0	15.1	9.2	16.7	15.8	27.0	21.6	30.0
13	21.6	11.7	14.2	7.9	15.6	15.5	26.7	21.6	29.5
14	21.8	11.4	14.3	7.2	14.7	15.1	26.4	21.3	29.2
15	22.2	11.6	14.5	6.7	13.9	14.4	25.8	21.0	28.9
16	22.2	MSG	14.8	6.8	13.5	13.5	25.0	20.3	28.4
17	22.9	12.1	15.0	7.7	14.2	13.4	24.6	19.8	27.8
18	23.9	MSG	15.5	7.4	14.5	13.5	24.6	19.4	27.2
19	23.4	MSG	16.2	7.8	14.5	13.2	24.3	19.1	26.8
20	22.2	12.7	15.8	8.4	14.9	13.6	24.5	18.9	26.5
21	21.7	12.1	15.0	8.3	15.3	13.4	24.5	18.8	26.3
22	19.4	11.0	14.4	8.2	15.2	14.3	25.1	19.0	26.2
23	19.4	9.8	12.4	7.5	15.1	14.7	25.7	19.7	26.6
24	19.7	9.4	11.8	6.3	14.3	14.7	25.8	20.0	27.1
25	19.2	9.3	11.7	6.0	13.1	13.7	25.1	20.1	27.4
26	18.5	8.5	12.1	5.2	12.3	12.9	24.1	19.5	27.2
27	19.0	8.3	11.5	4.6	12.3	12.7	23.8	18.9	26.8
28	19.1	8.5	11.6	3.9	11.7	12.8	23.8	18.5	26.4
29	19.2	8.6	11.7	3.6	11.2	12.6	23.8	18.6	26.1
30	20.1	9.0	11.8	3.7	11.1	12.4	23.4	19.0	26.3
31	22.8	10.4	12.5	5.1	11.8	12.3	23.3	19.3	26.7

Table 4: Summary of Least Tern Surveys – 1985 – 2009
Lower Mississippi River

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Aerial											
Individuals	187	1,332	1,125	1,018	2,503	4,182	3,358	2,311	4,589	3,303	3,759
Sites	12	37	49	56	58	56	67	80	66	66	63
Colonies	3	16	24	31	46	36	56	61	46	40	51
Towboat											
Individuals	577	595	575	1,235	508	357	1,154	1,216	2,031	965	489
Sites	35	39	45	71	25	31	39	47	48	39	25
Colonies	15	16	21	33	9	3	29	34	21	30	1
Small Boat											
Individuals	0	2,188	2,206	2,356	2,005	5,038	4,297	3,653	0	6,776	6,971
Sites	0	41	50	72	64	38	66	81	0	78	70
Colonies	0	28	46	60	42	32	57	74	0	69	62
Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Aerial											
Individuals	3,677	2,129	0	0	0	0	0	0	0	0	0
Sites	81	81	0	0	0	0	0	0	0	0	0
Colonies	20	23	0	0	0	0	0	0	0	0	0
Small Boat											
Individuals	3,067	3,428	5,538	6,159	5,920	6,361	5,802	8,082	11,239	10,960	8,171
Sites	47	79	91	134	124	141	100	115	114	118	144
Colonies	31	57	39	38	64	54	68	68	69	88	107
Year	2007	2008	2009								
Small Boat											
Individuals	9,814	12,183	9,516								
Sites	121	116	110								
Colonies	96	62	78								

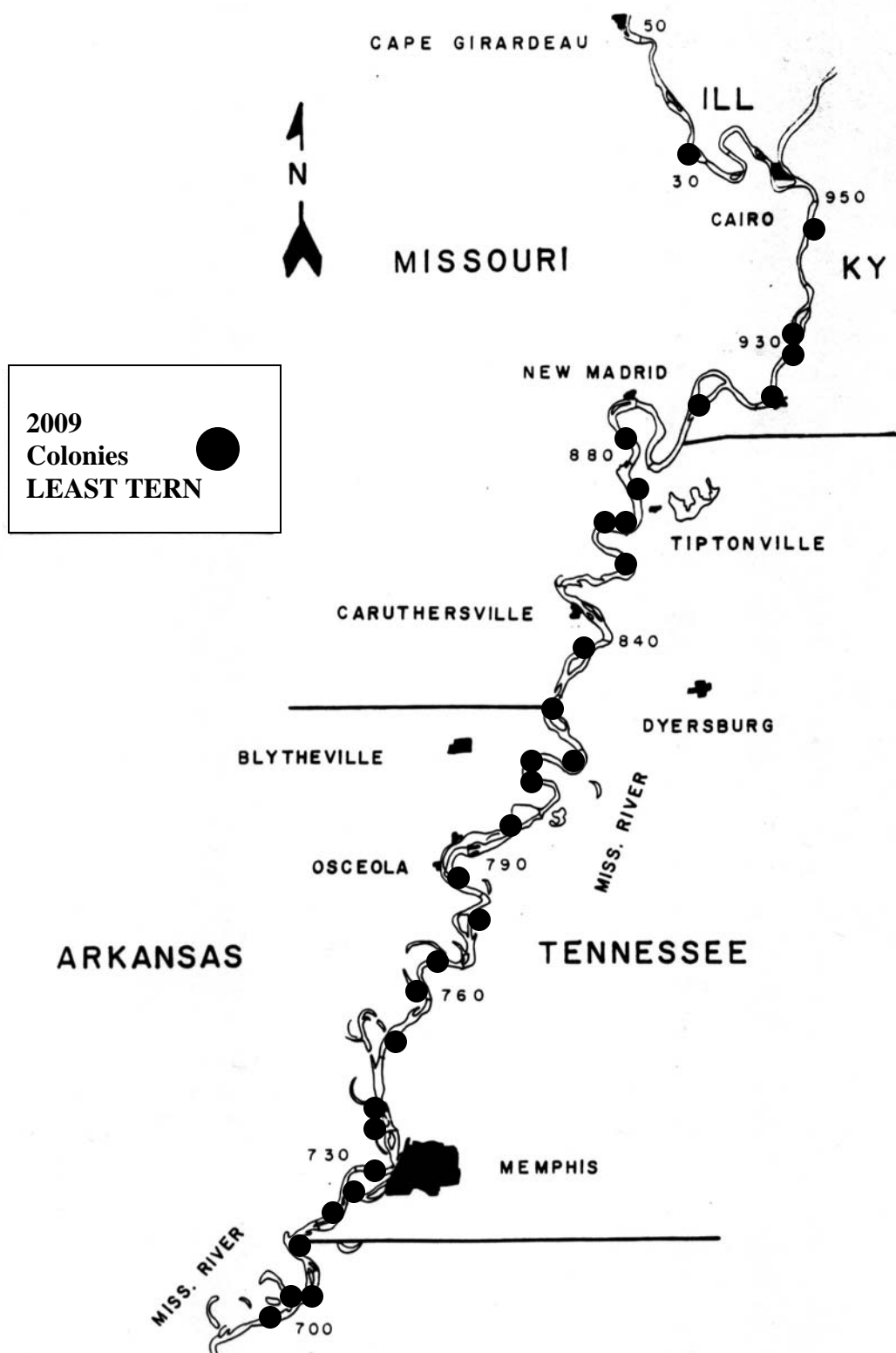


Figure 1: Least Tern Survey – 2009 – Area Map of Nest Colonies on Mississippi River – Cape Girardeau, MO to Baton Rouge, LA

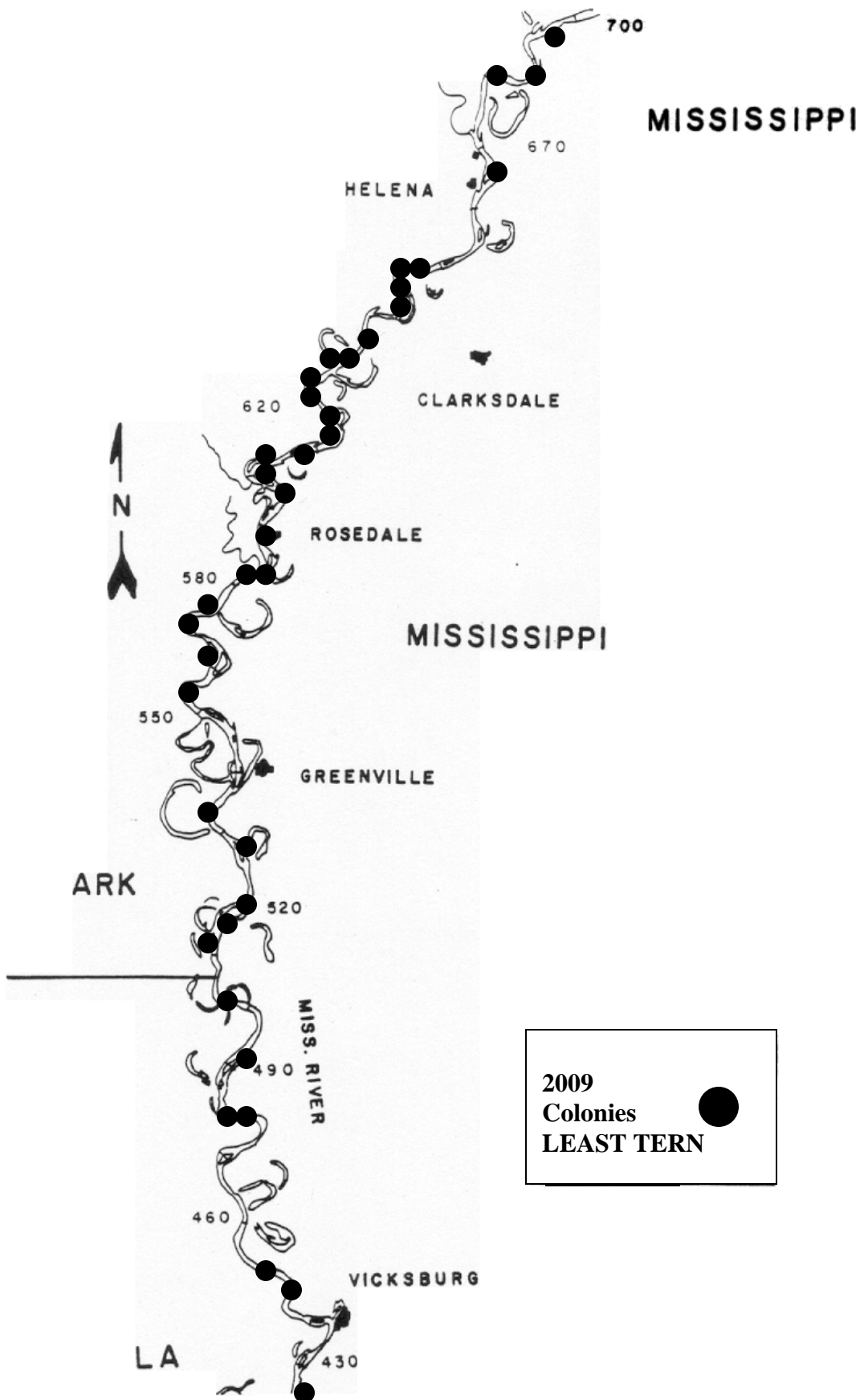


Figure 1 Continued: Area Map of Nest Colonies

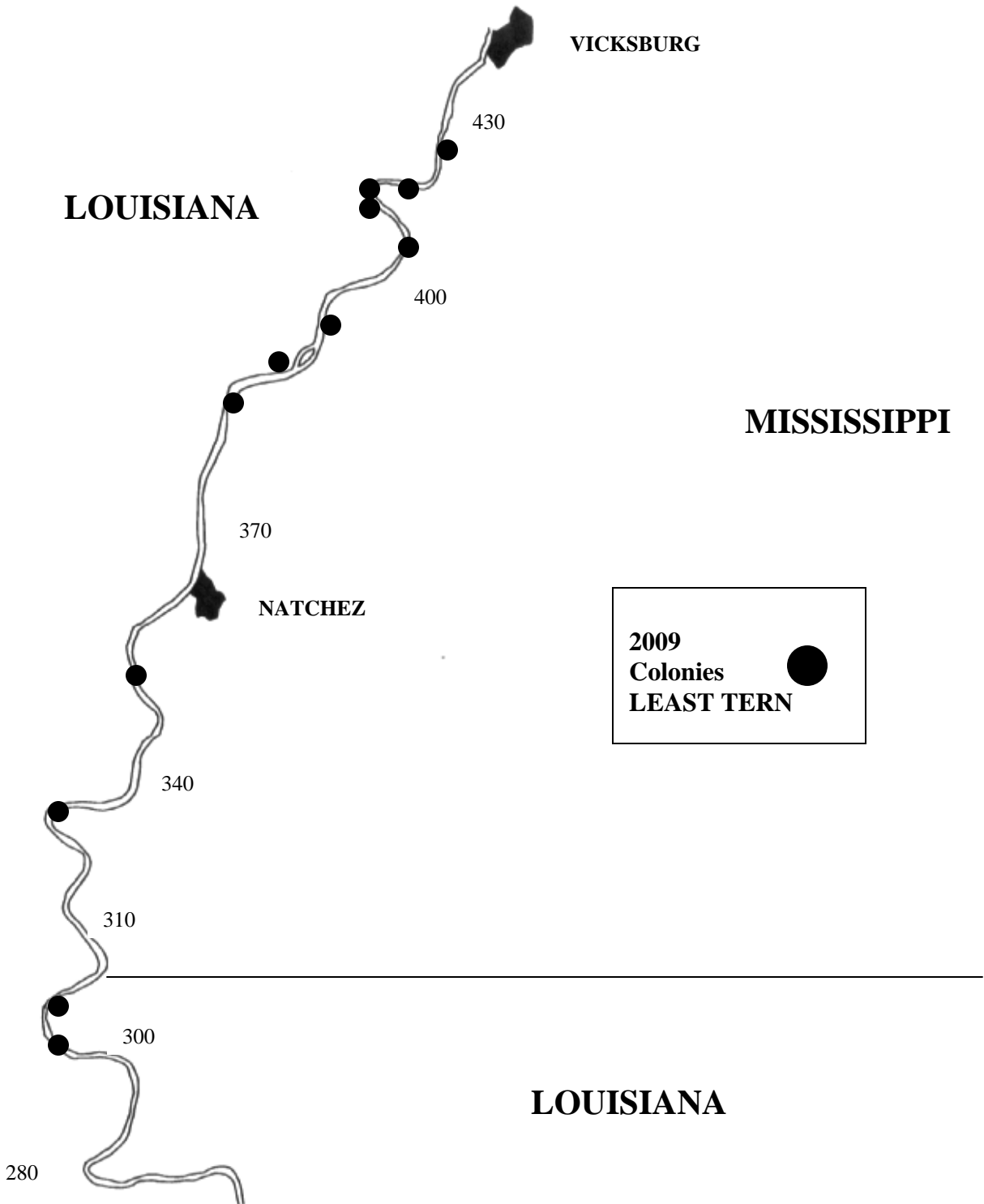
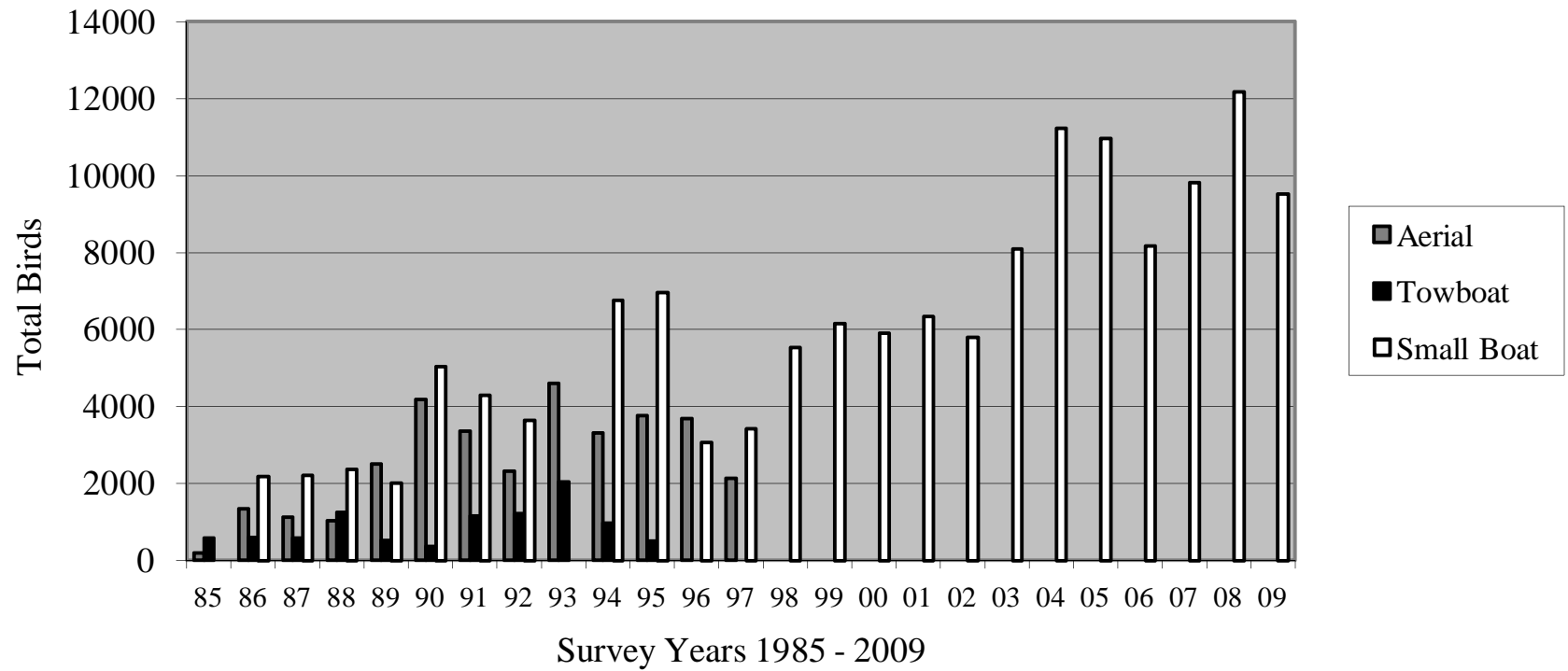


Figure 1 Continued: Area Map of Nest Colonies

Least Tern Surveys
Lower Mississippi River



**Population Survey of the Interior Least Tern
On the Mississippi River from
Cape Girardeau, Missouri to Baton Rouge, Louisiana**

2009

APPENDIX A

APPENDIX A – I

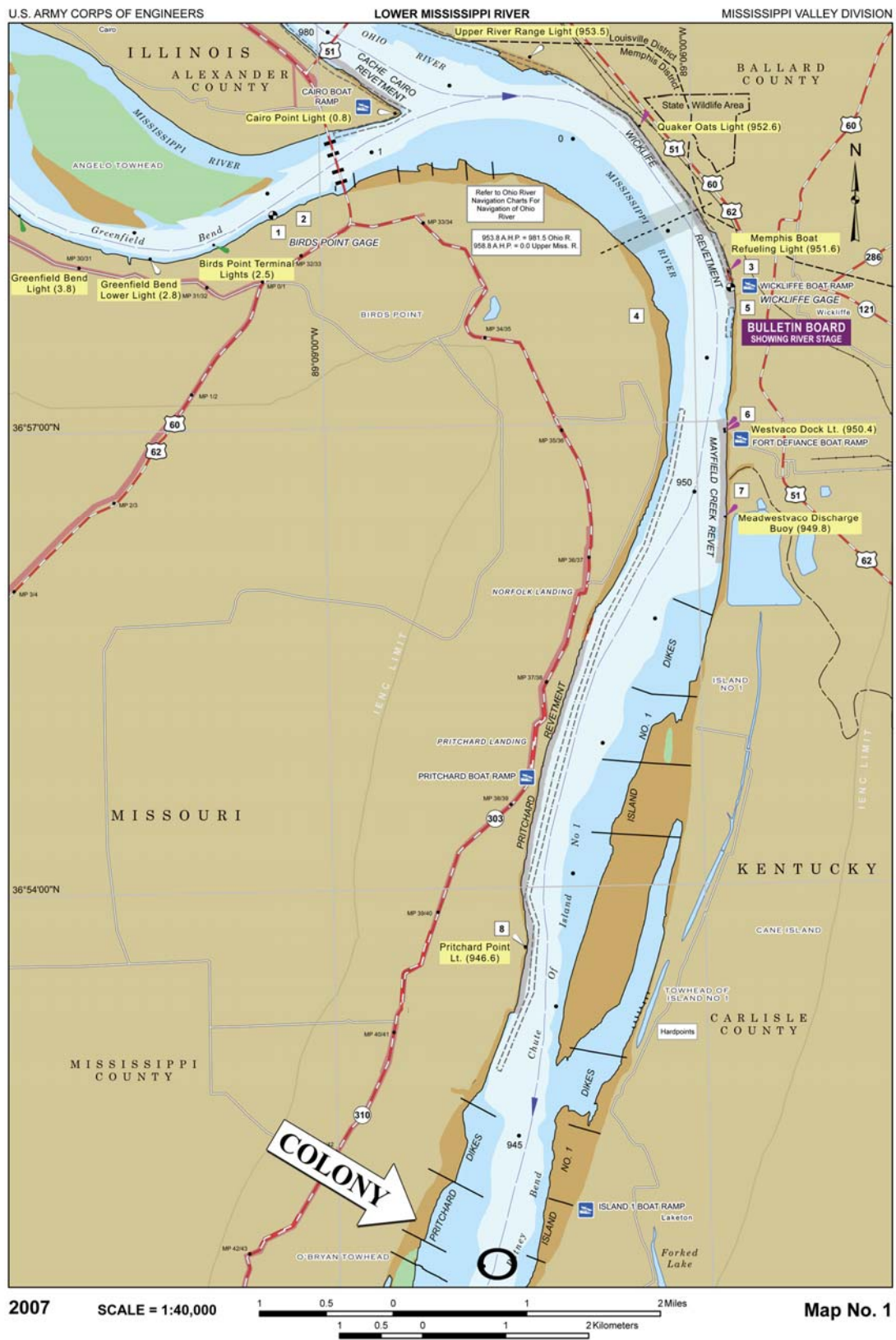
LEAST TERN SURVEY - 2009

**Mississippi River
Cape Girardeau, MO to Baton Rouge, LA**

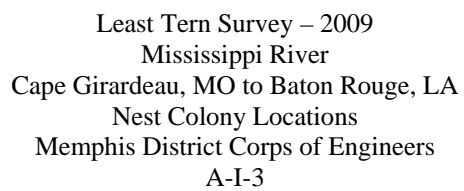
NEST COLONY LOCATIONS

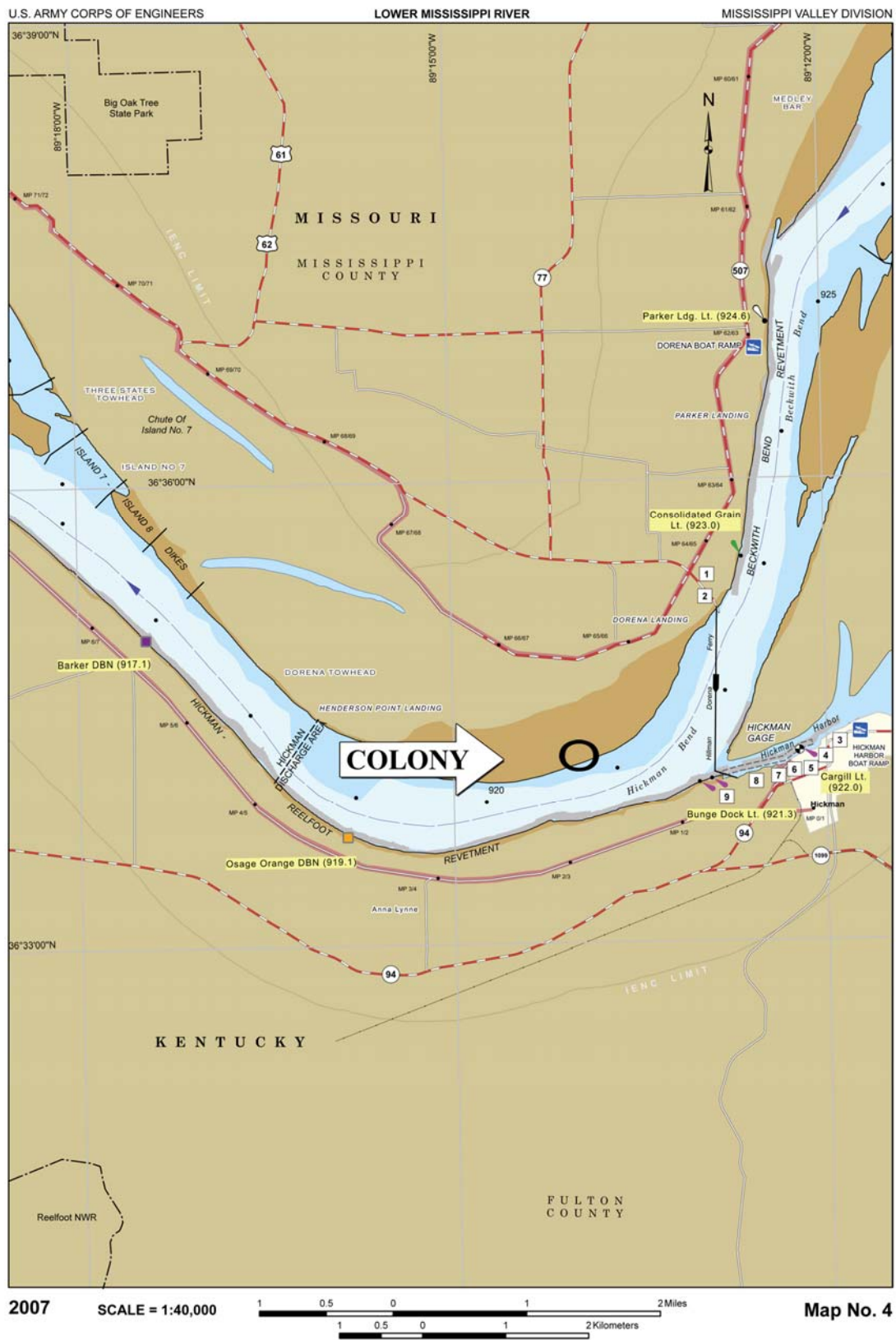
Memphis District, Corps of Engineers

Maps

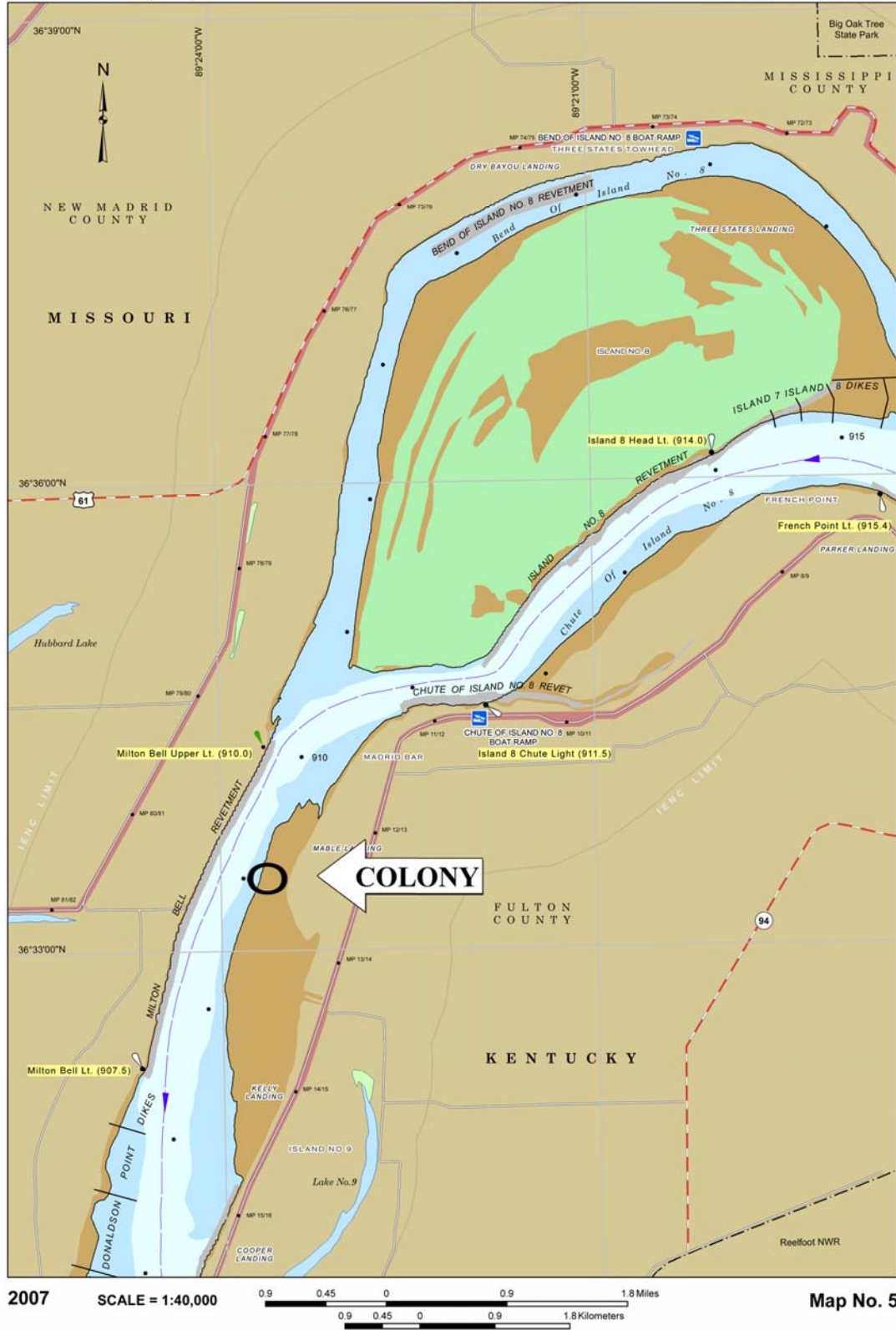


Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-2

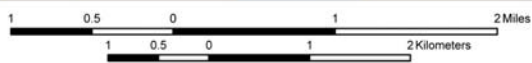




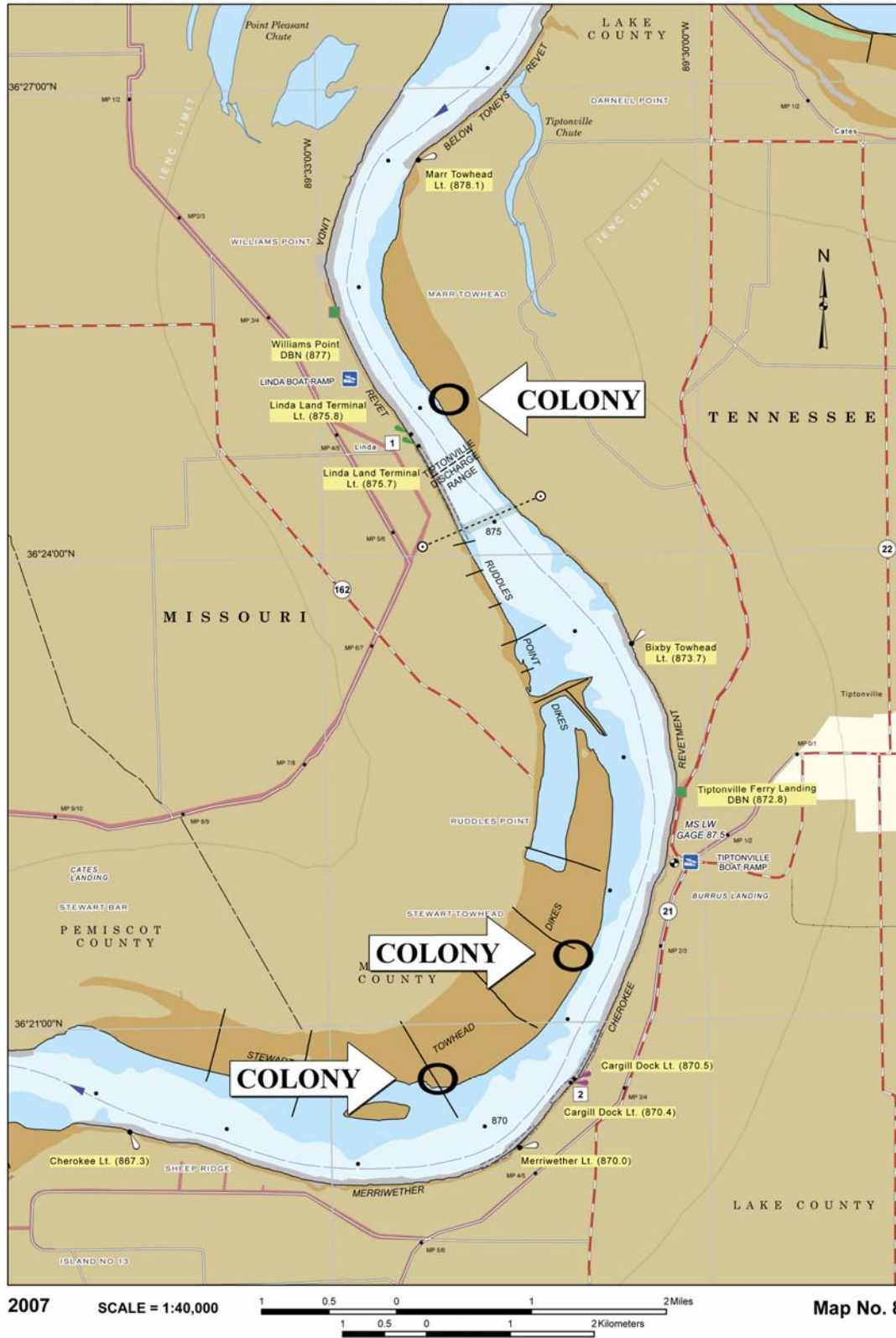
Least Tern Survey – 2009
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-4



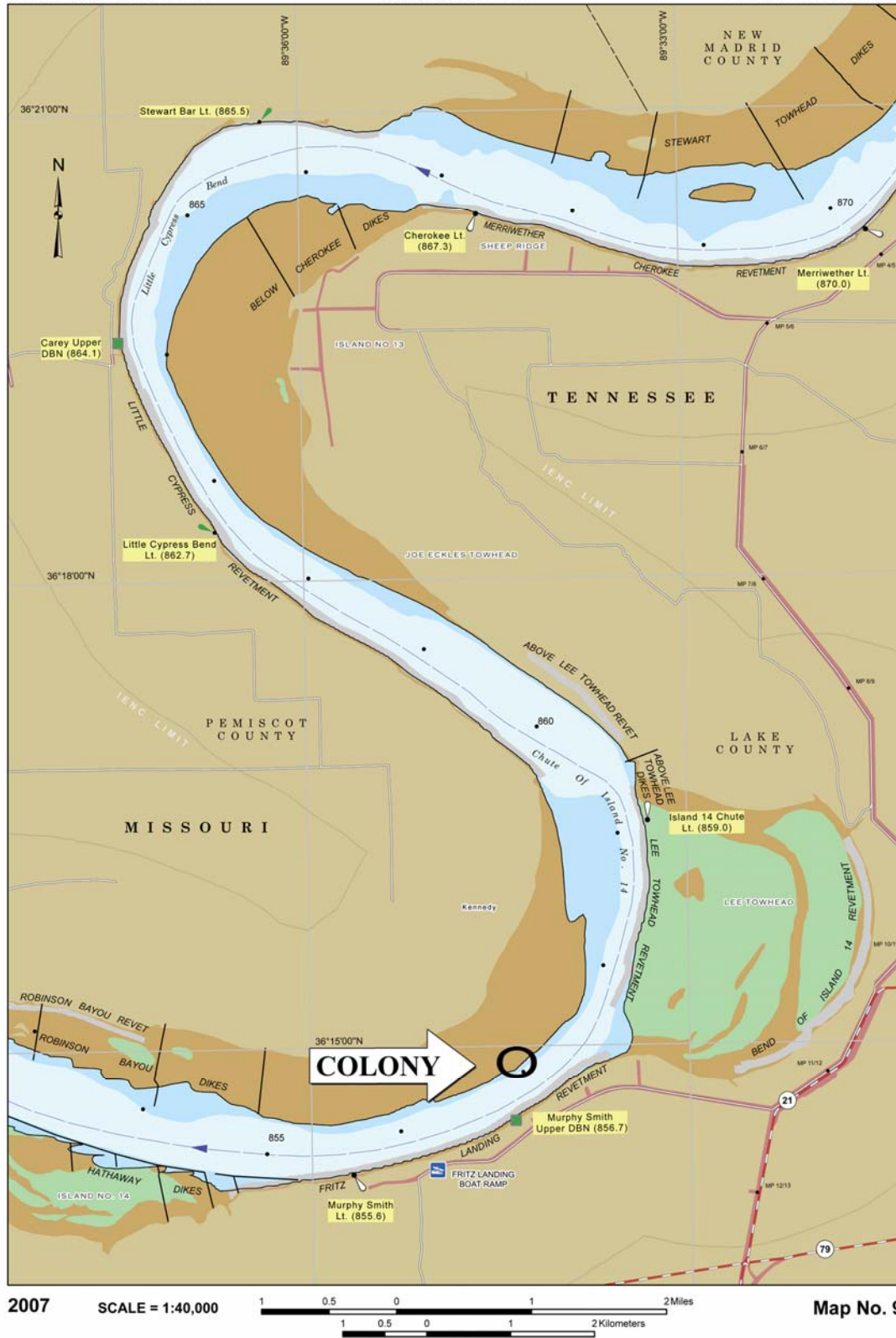
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-5



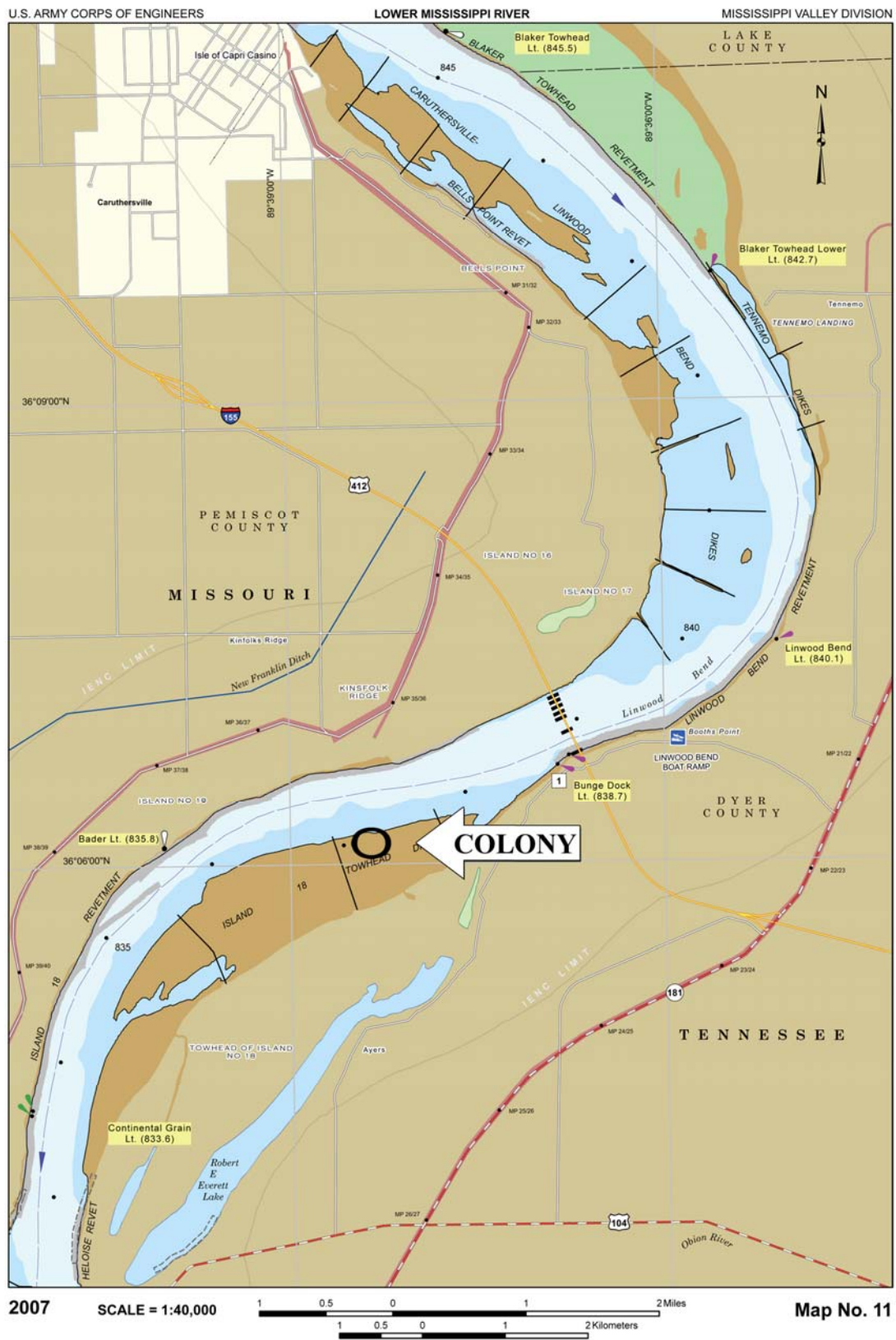
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Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-6



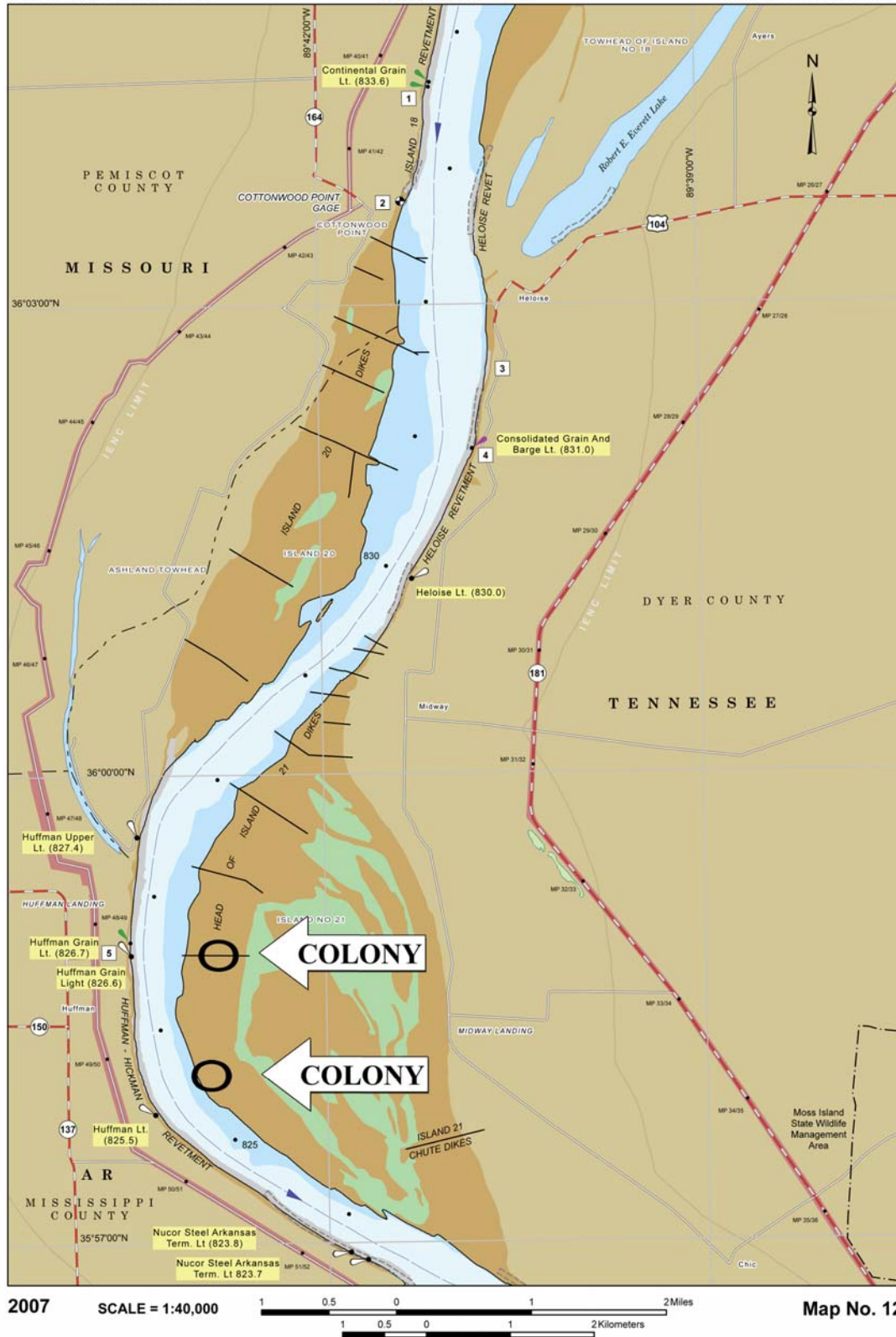
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-7



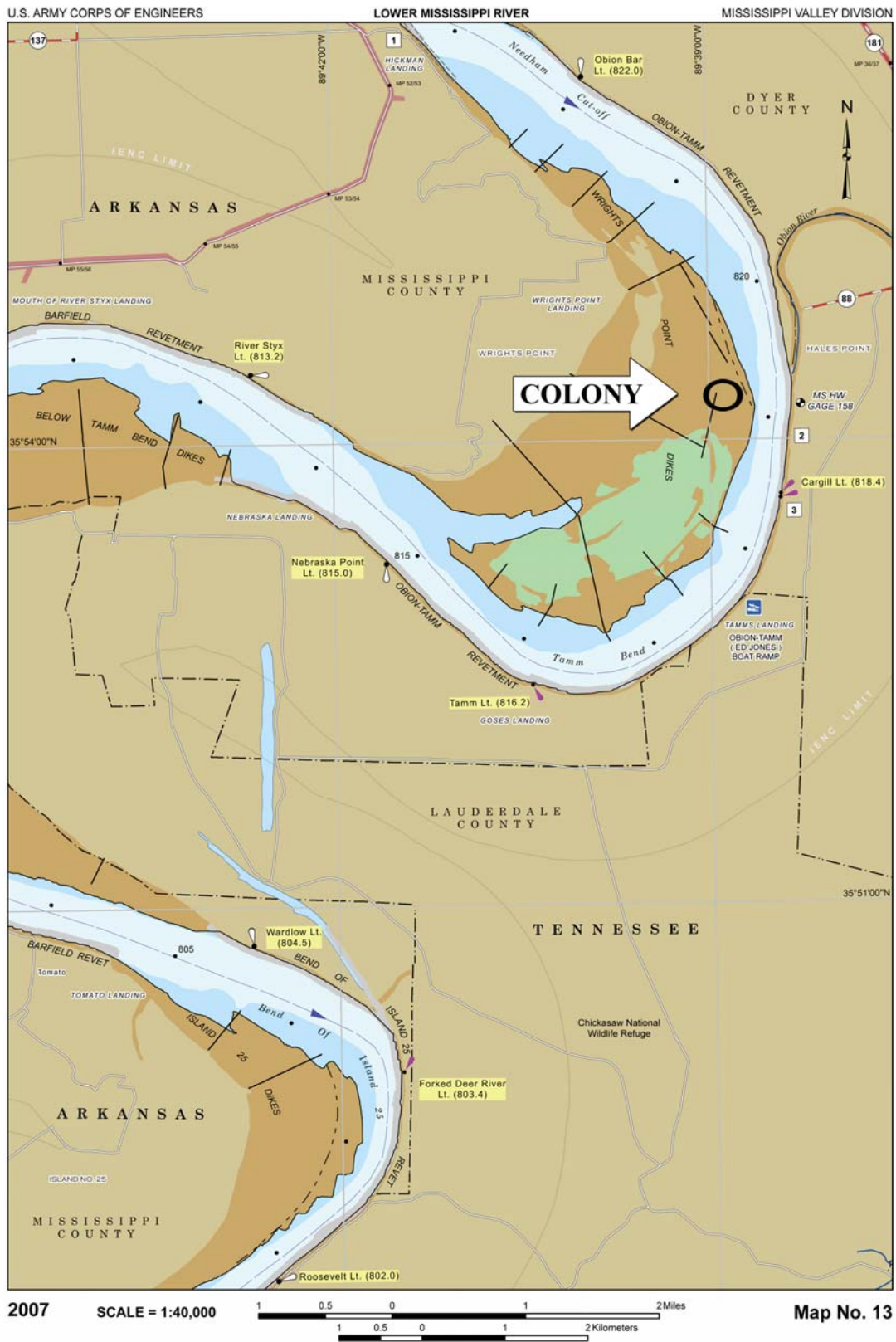
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 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-8



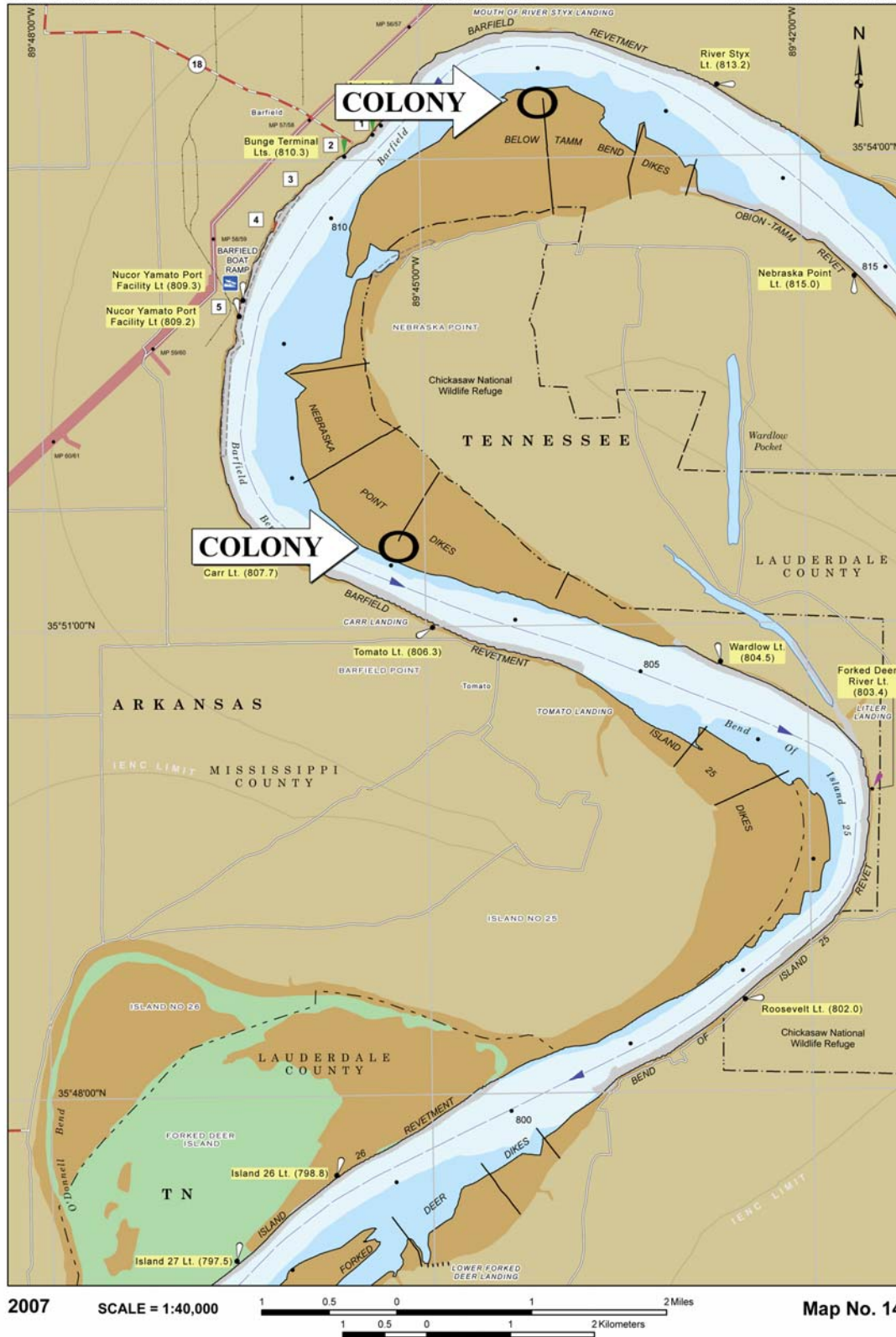
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-9



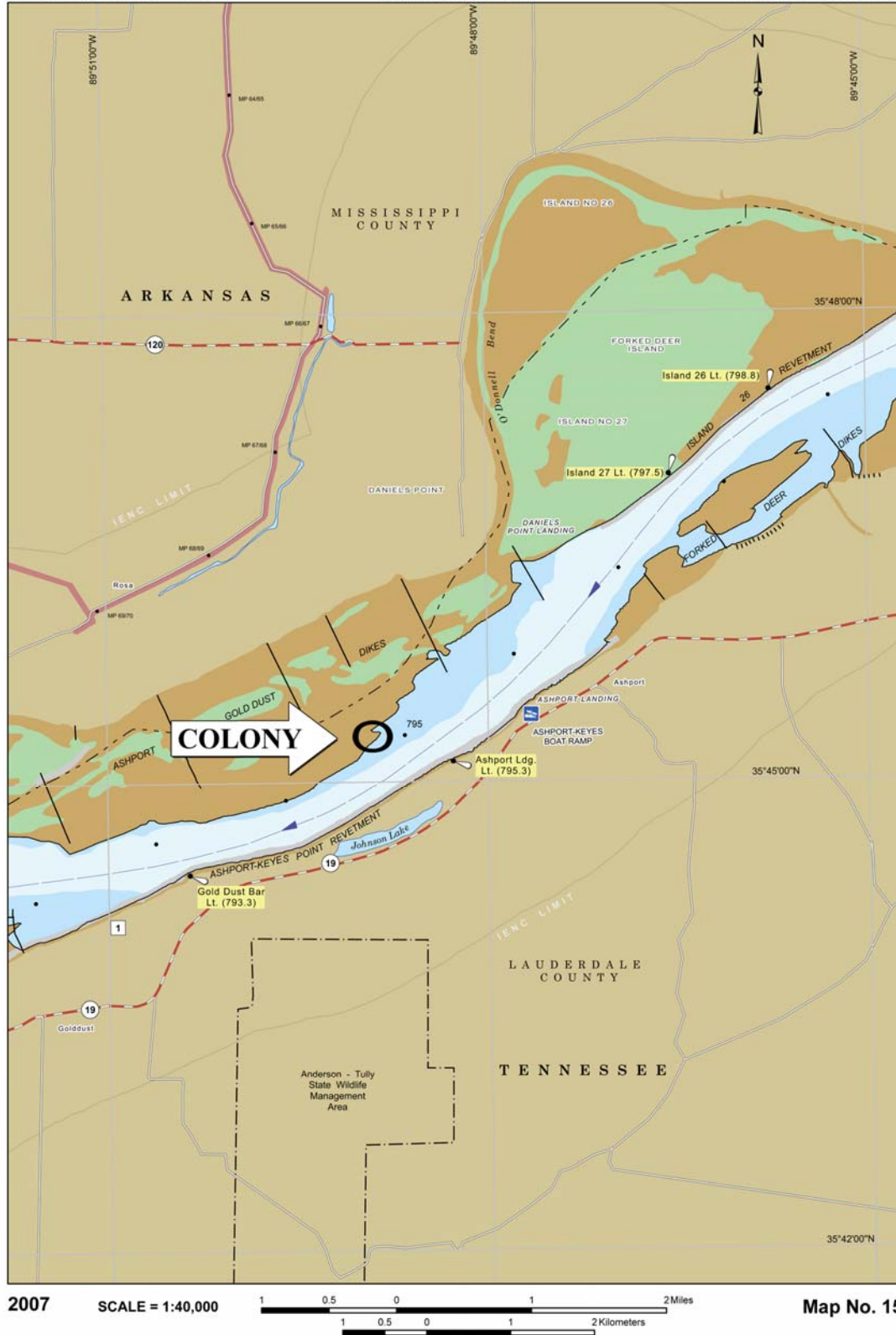
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-10



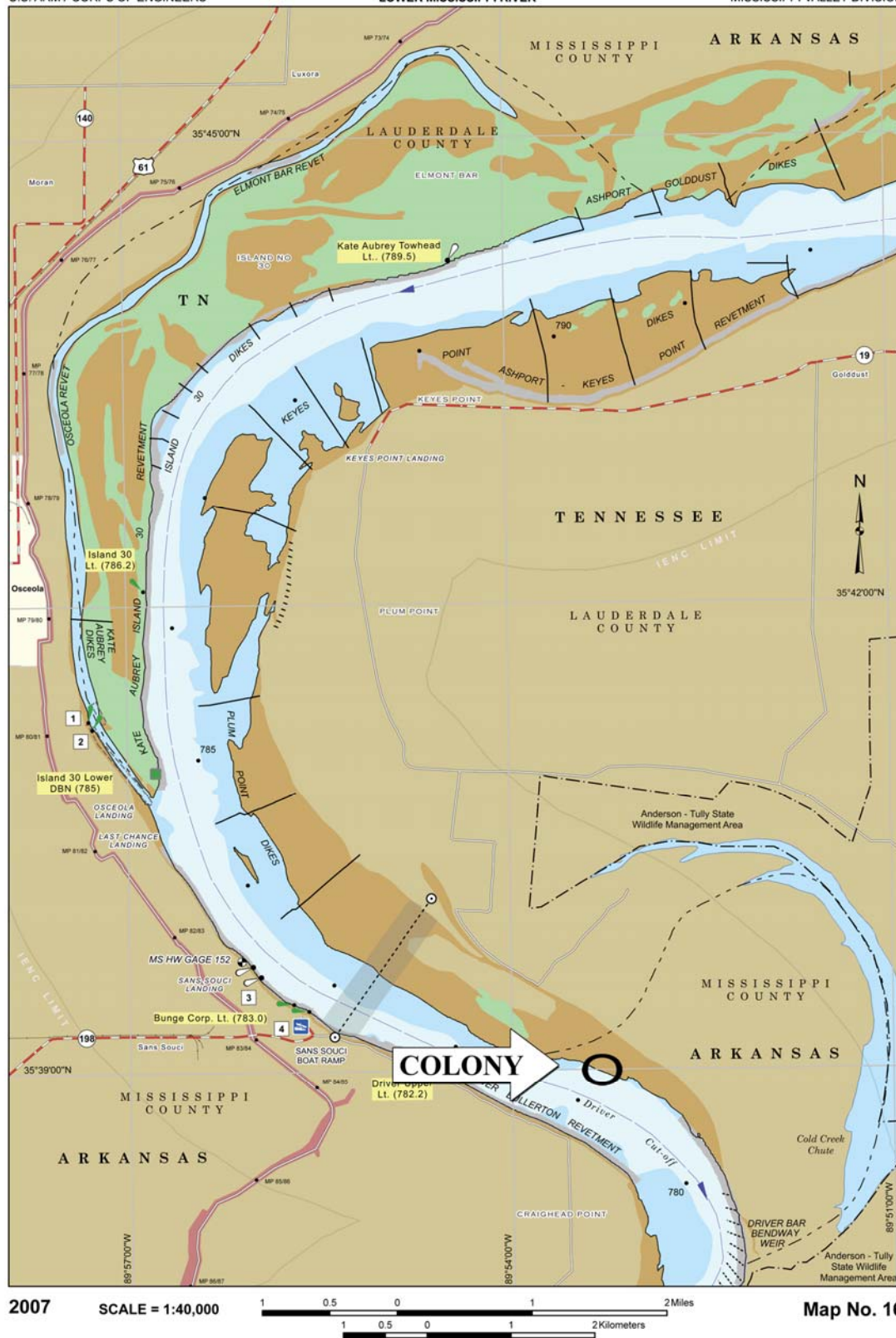
Least Tern Survey – 2009
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-11



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-12



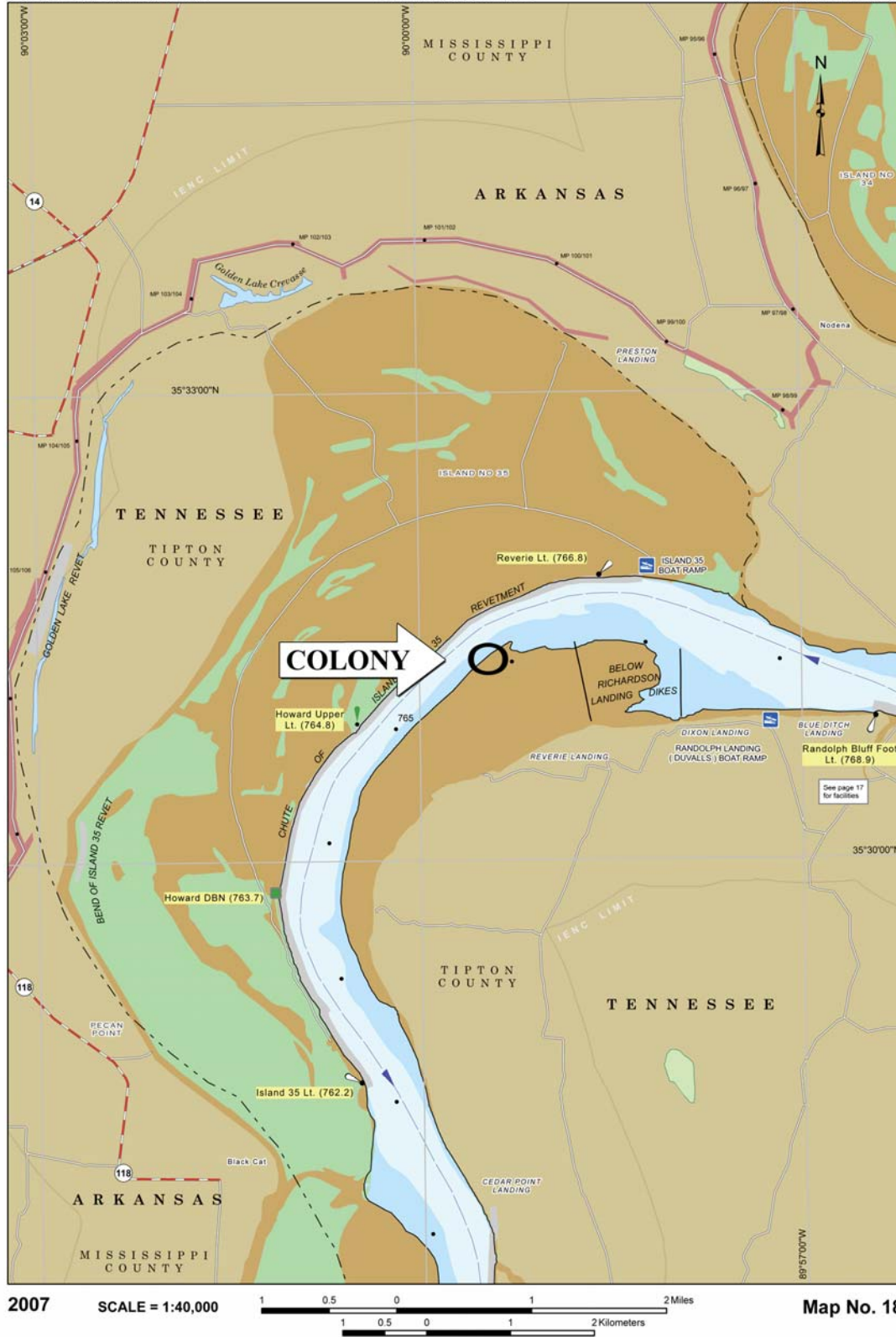
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 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-13



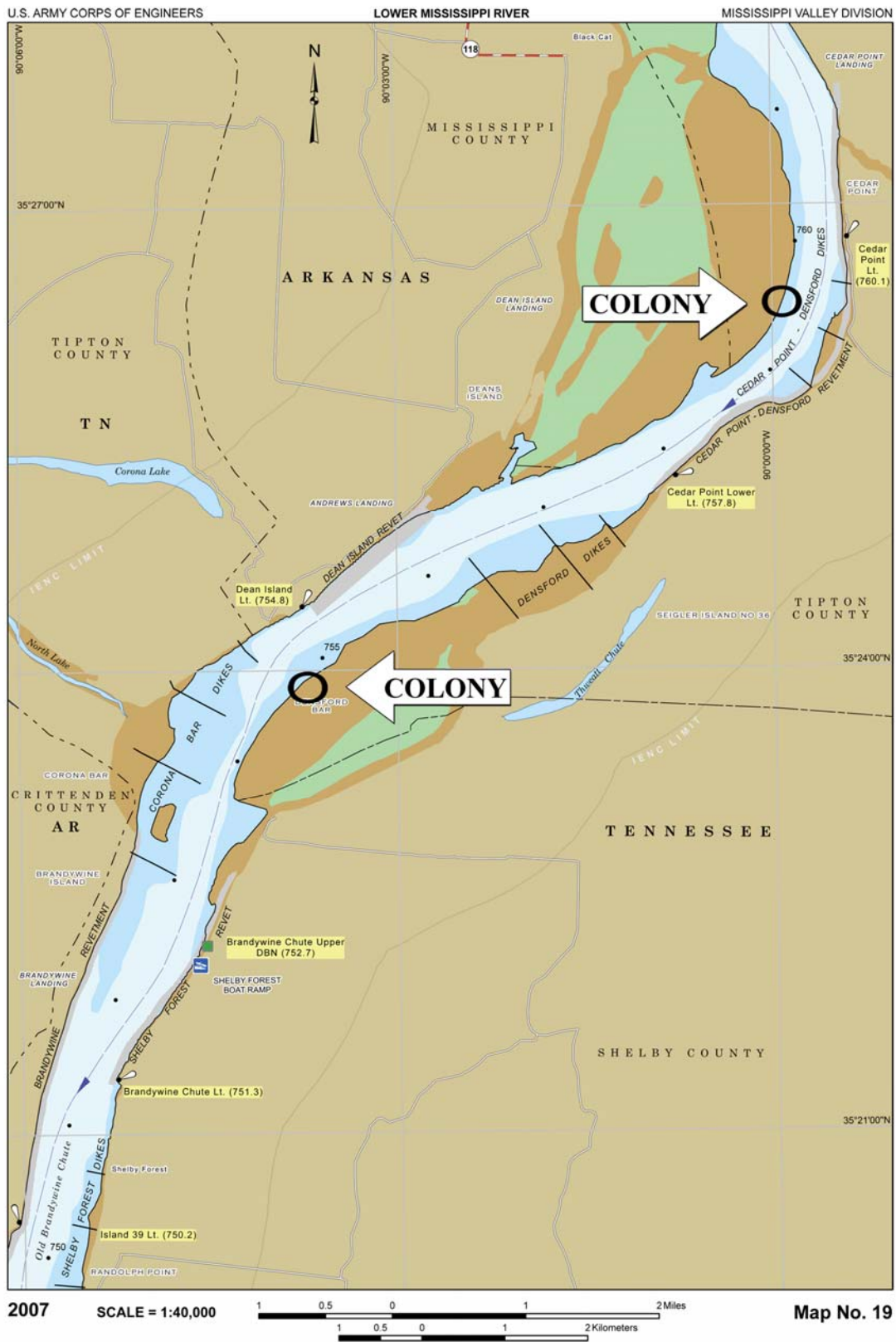
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 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-14



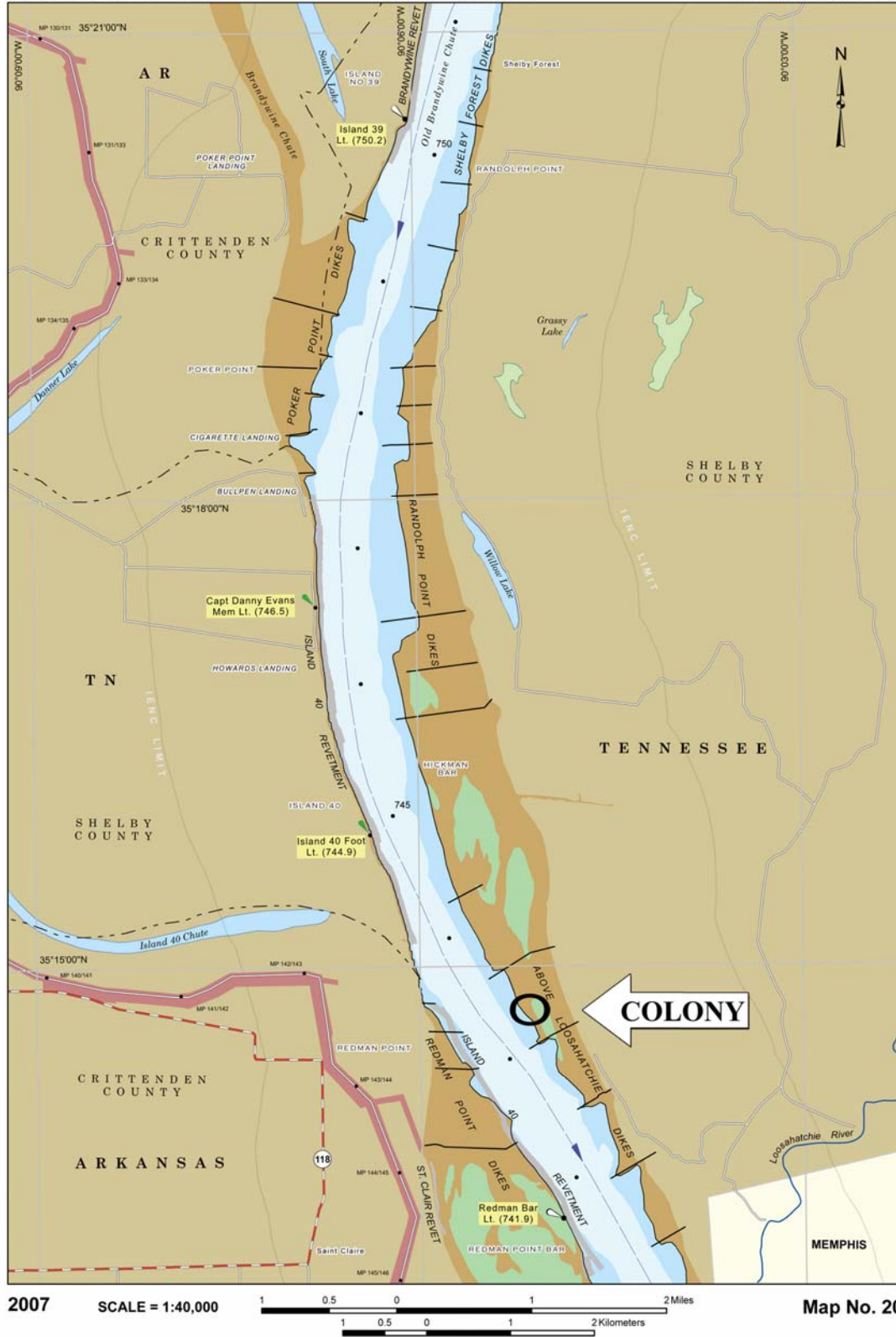
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-15



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-16



Least Tern Survey – 2009
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-17



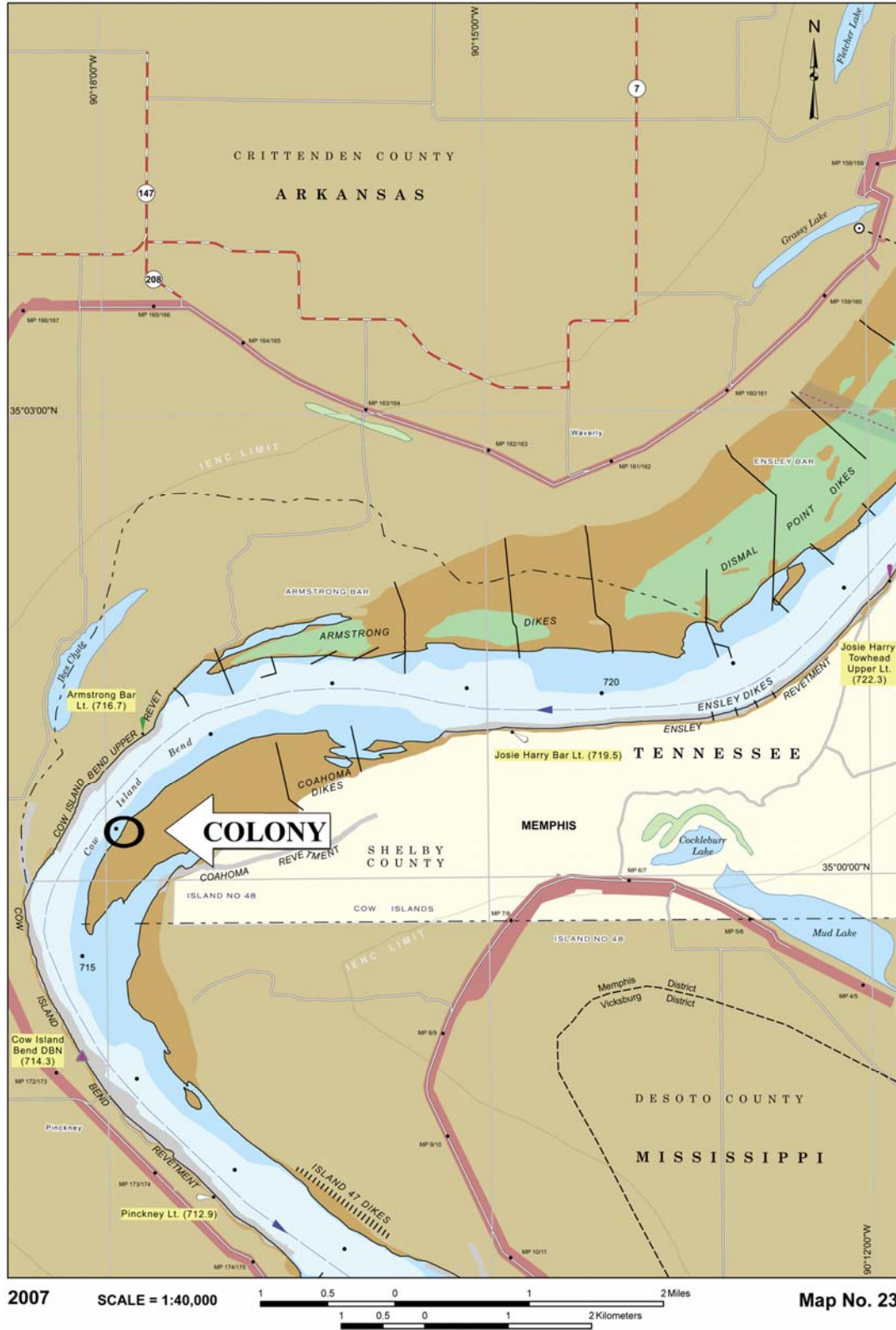
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-18



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-19



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-20



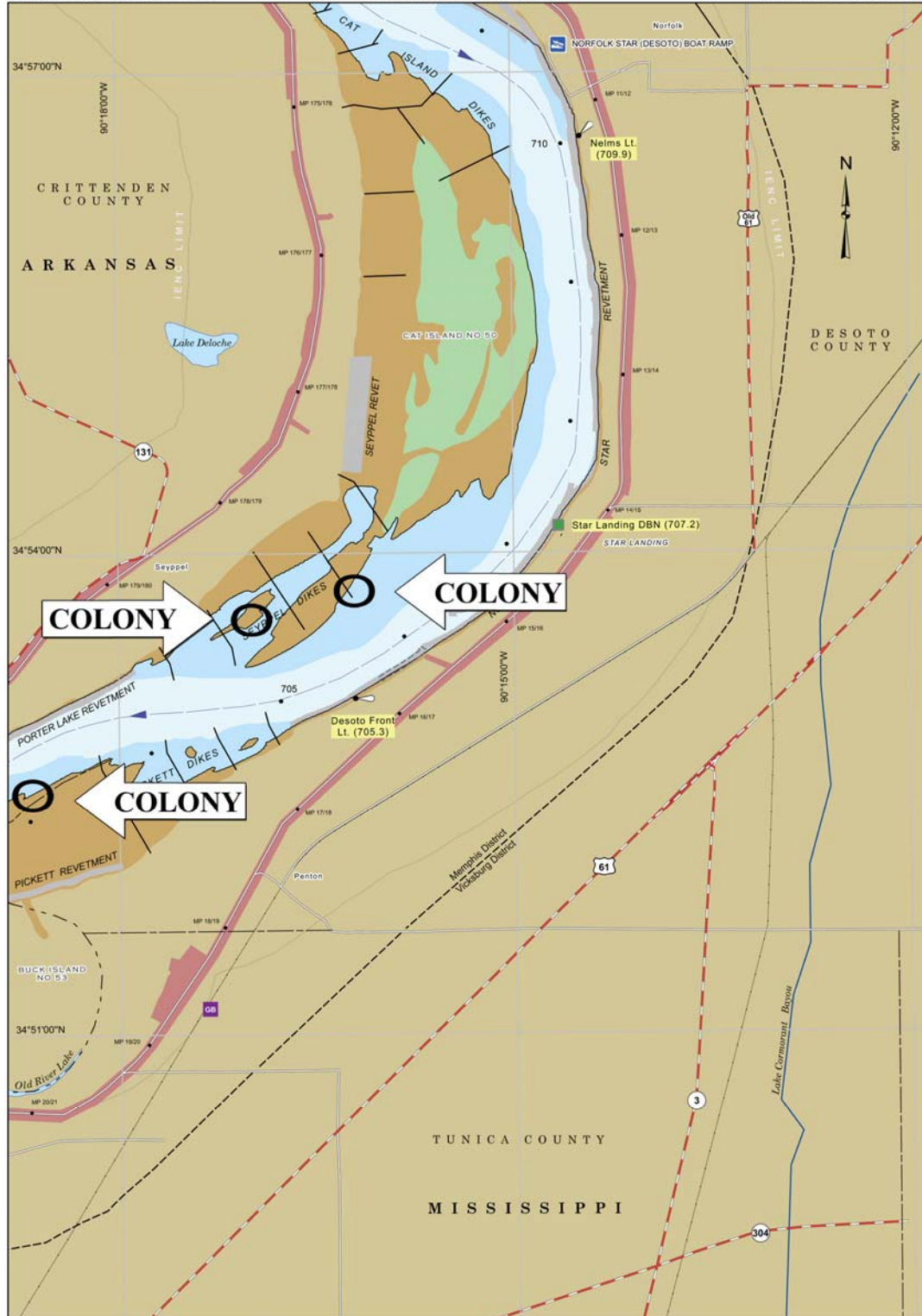
2007

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Map No. 23

Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-21



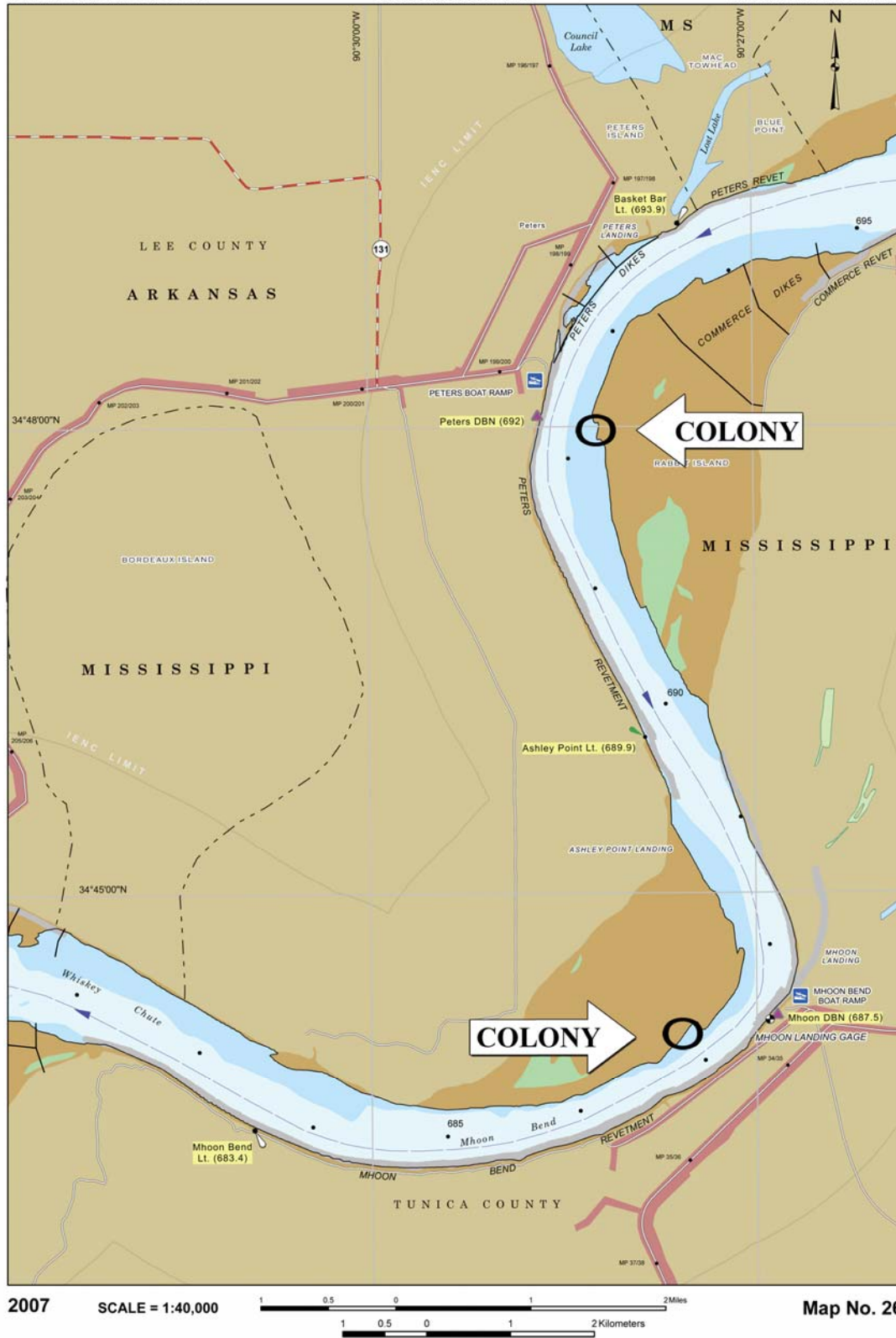
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Map No. 24

Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-22



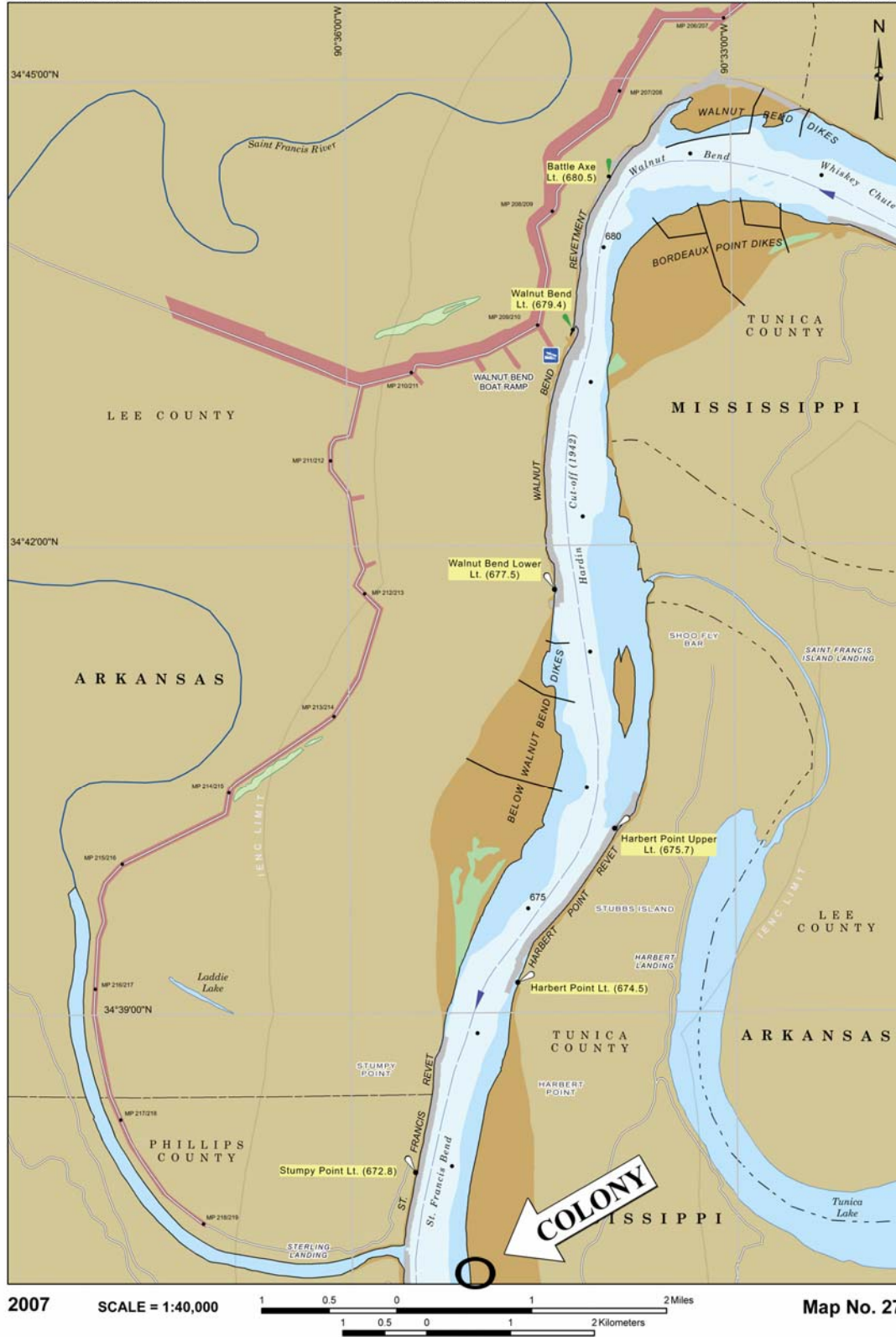
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Map No. 26

Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-23



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-24



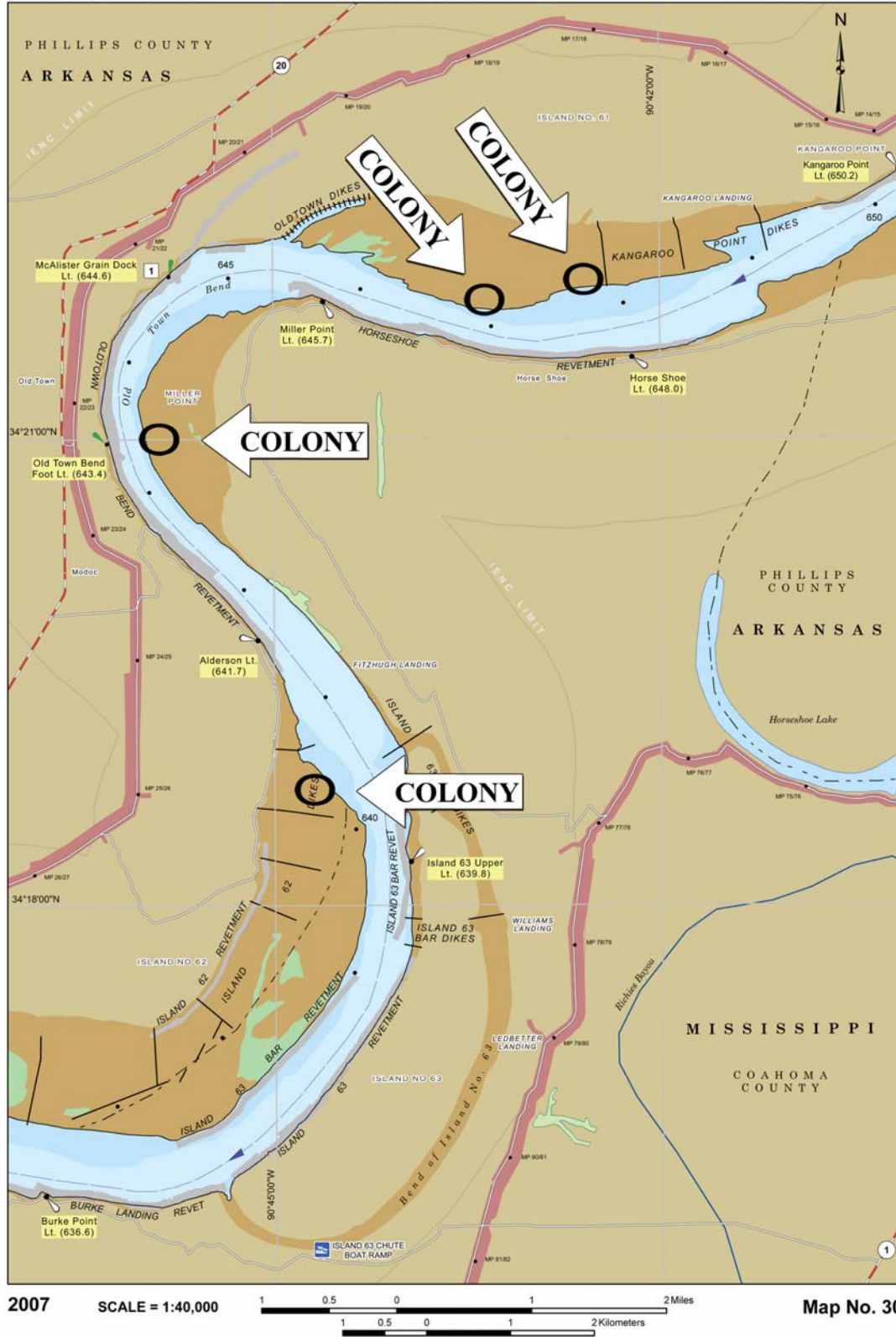
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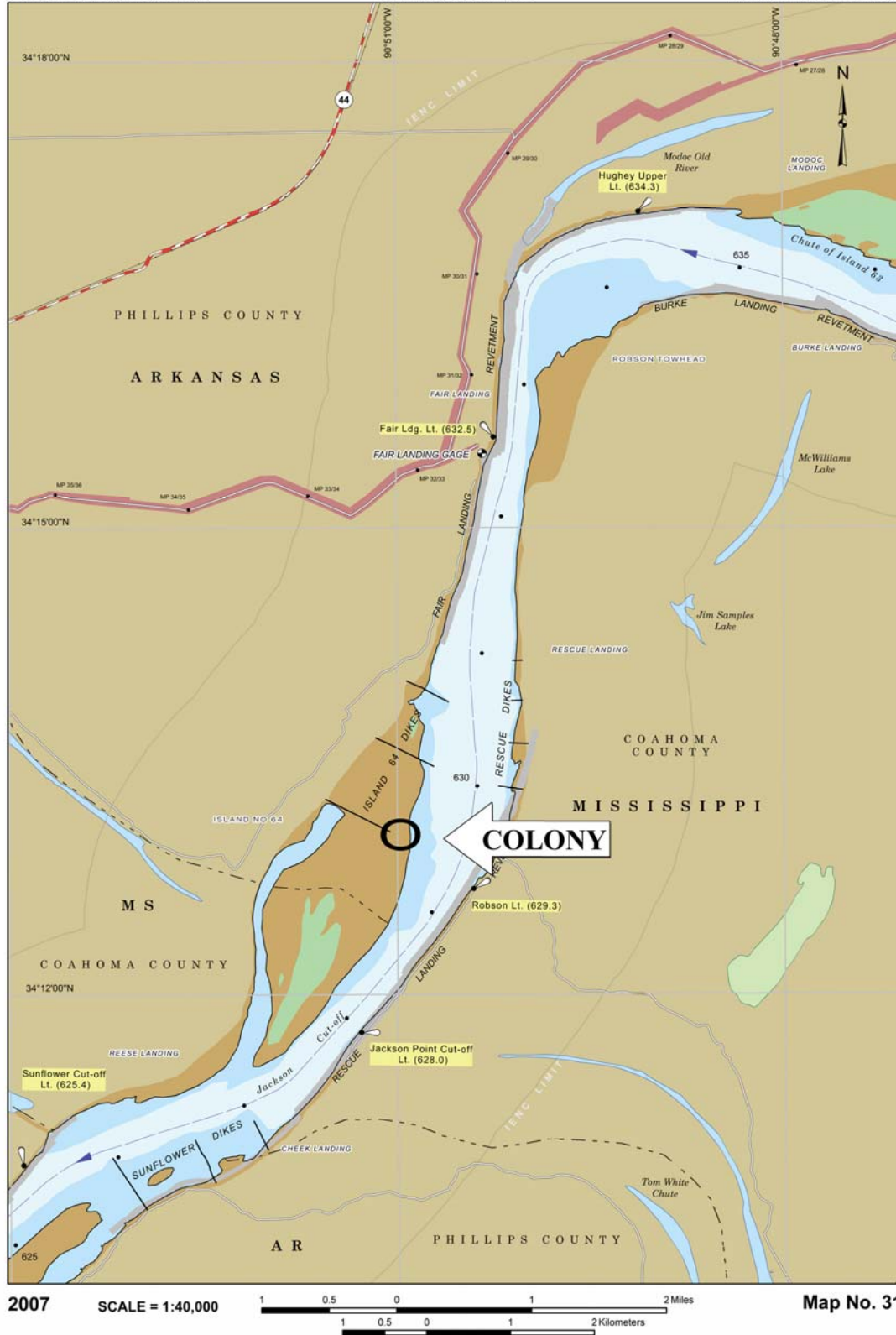


Map No. 28

Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-25



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-26



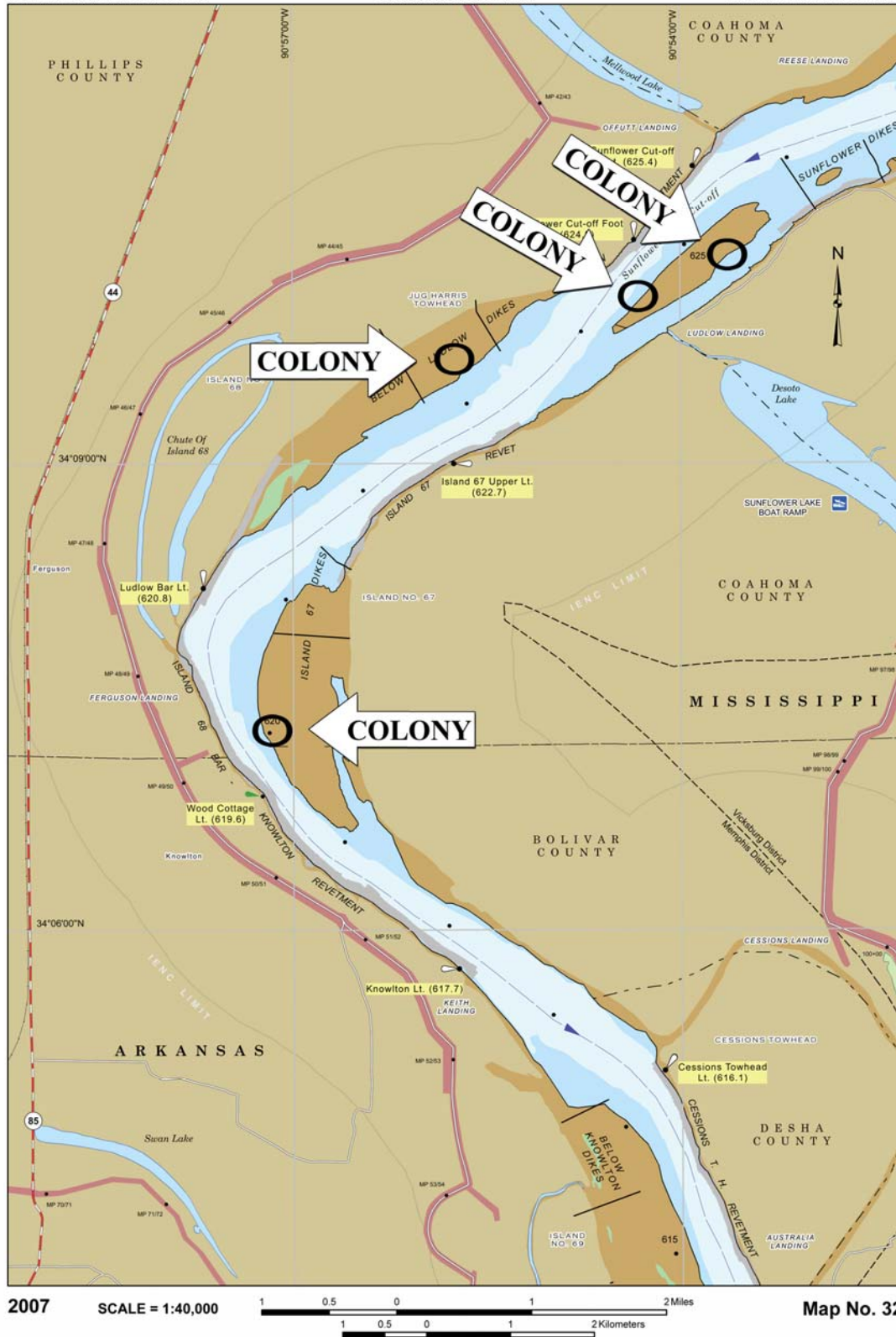
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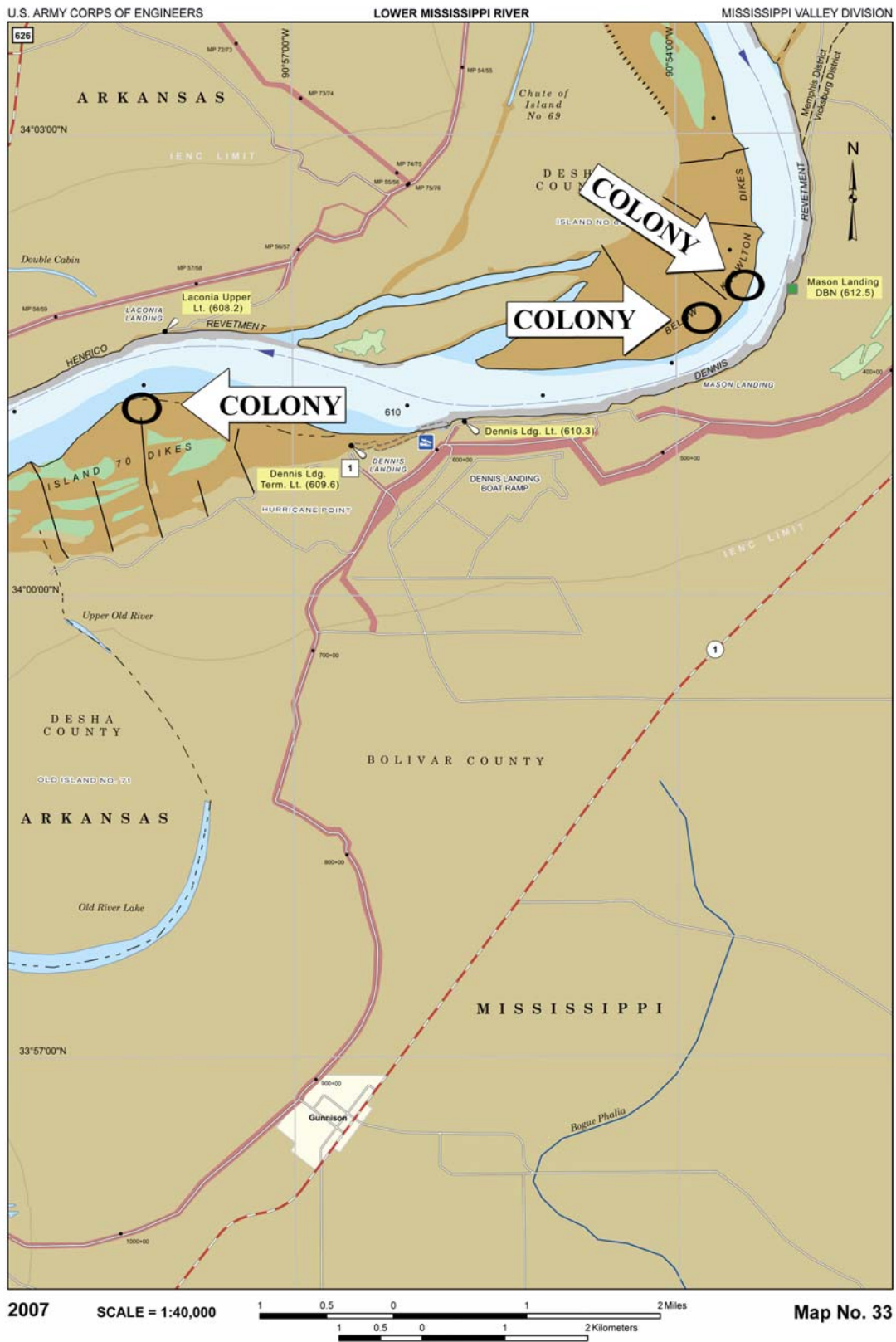
1 0.5 0 1 2 Miles
1 0.5 0 1 2 Kilometers

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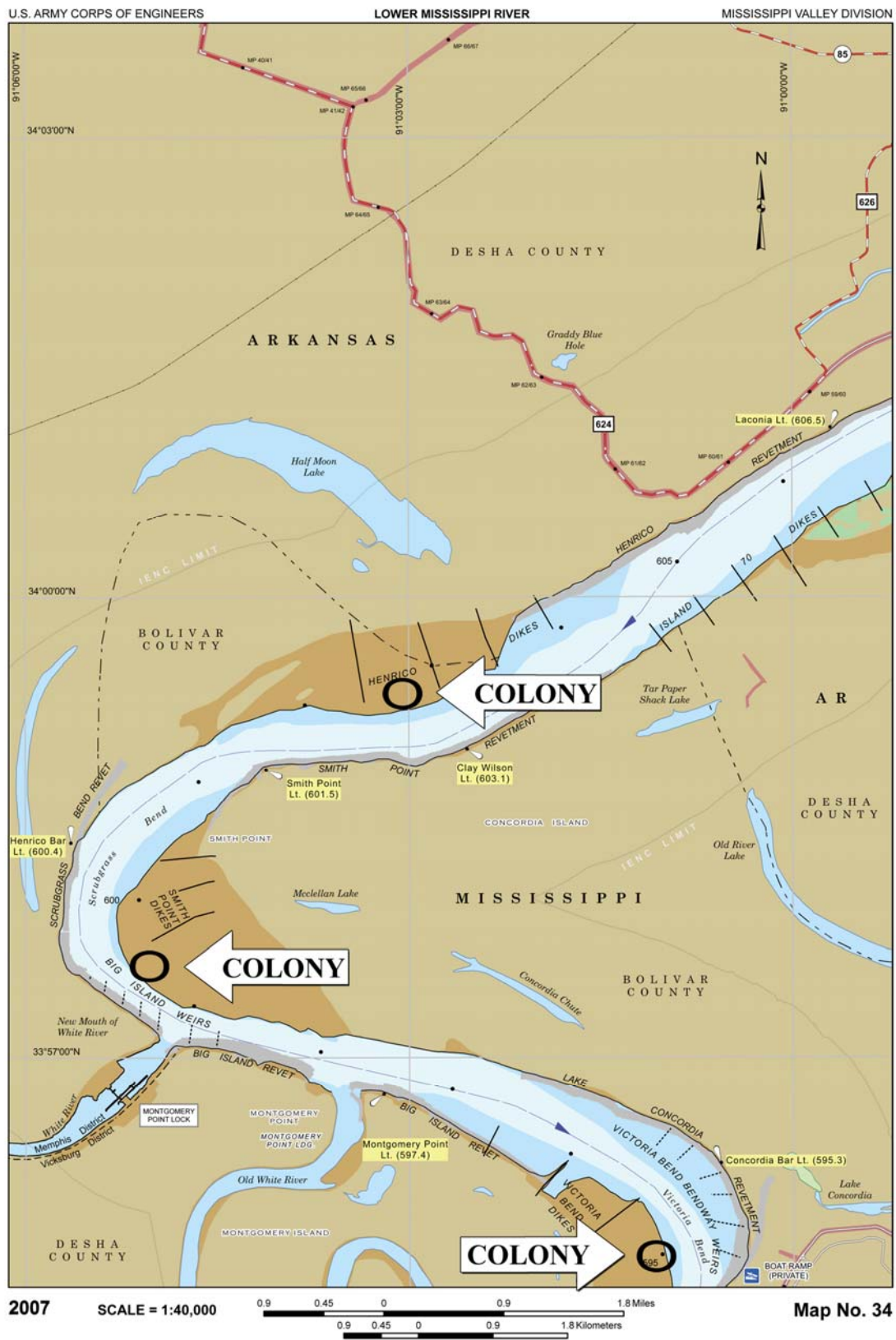
Least Tern Survey – 2009
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-27



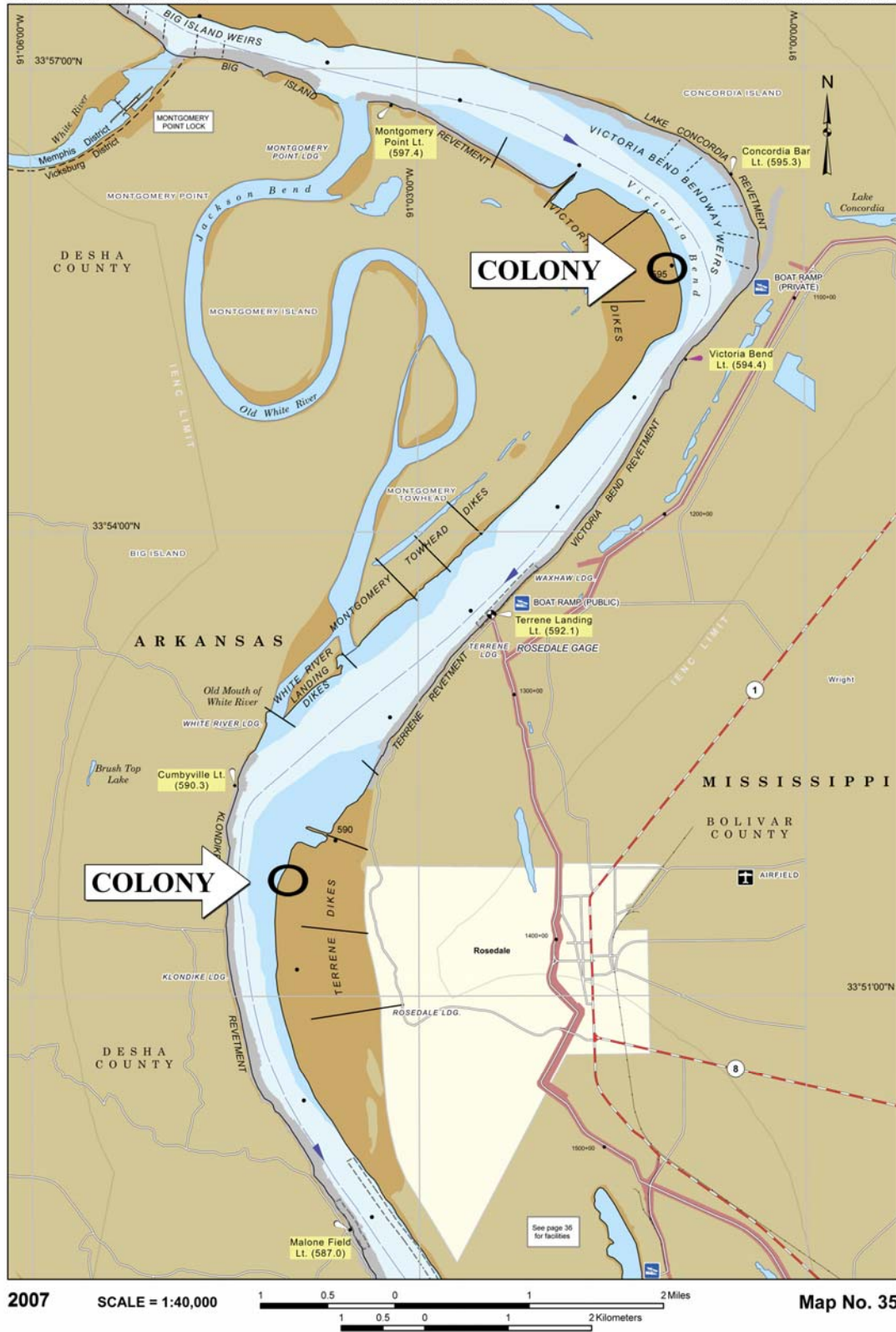
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-28



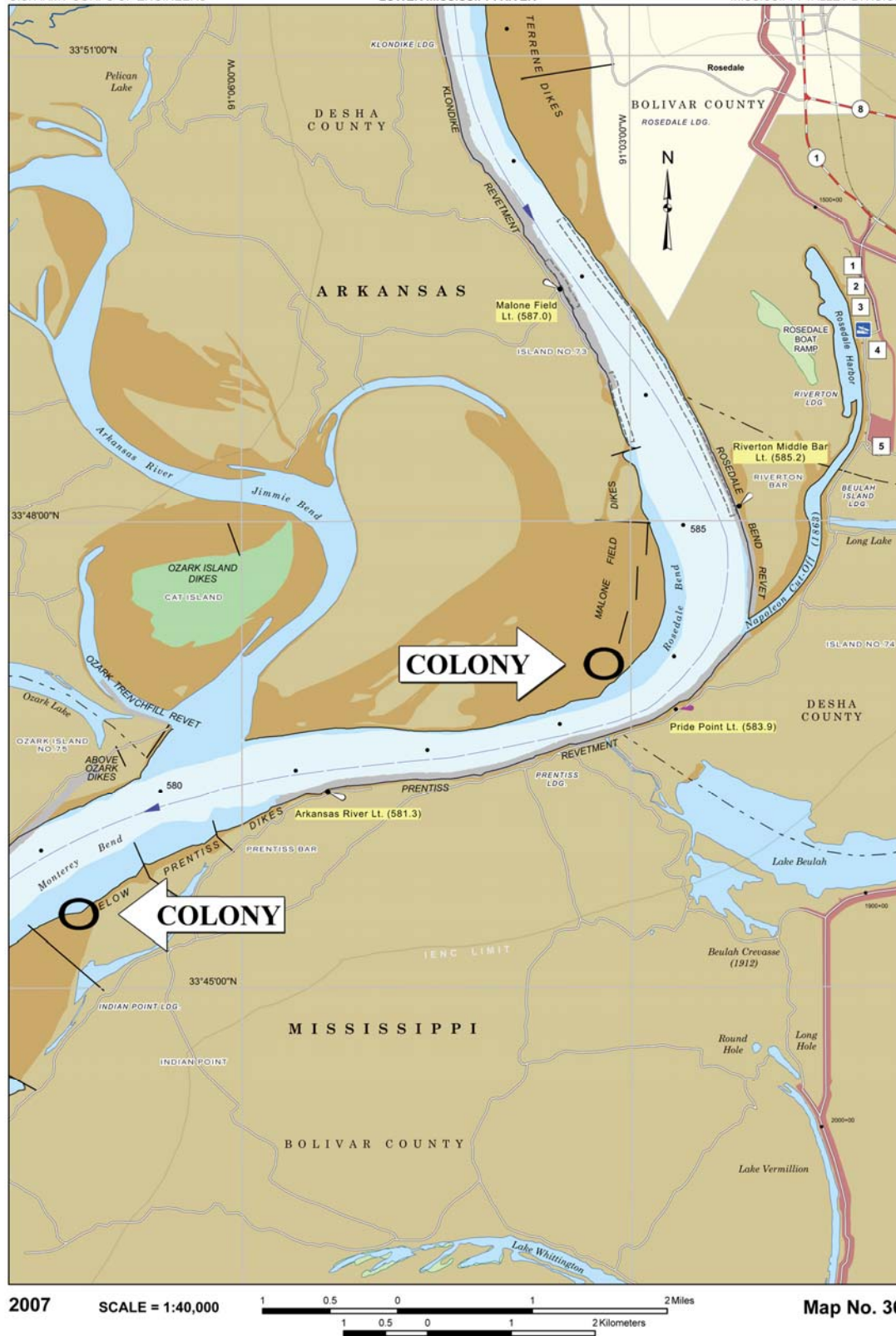
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 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-29



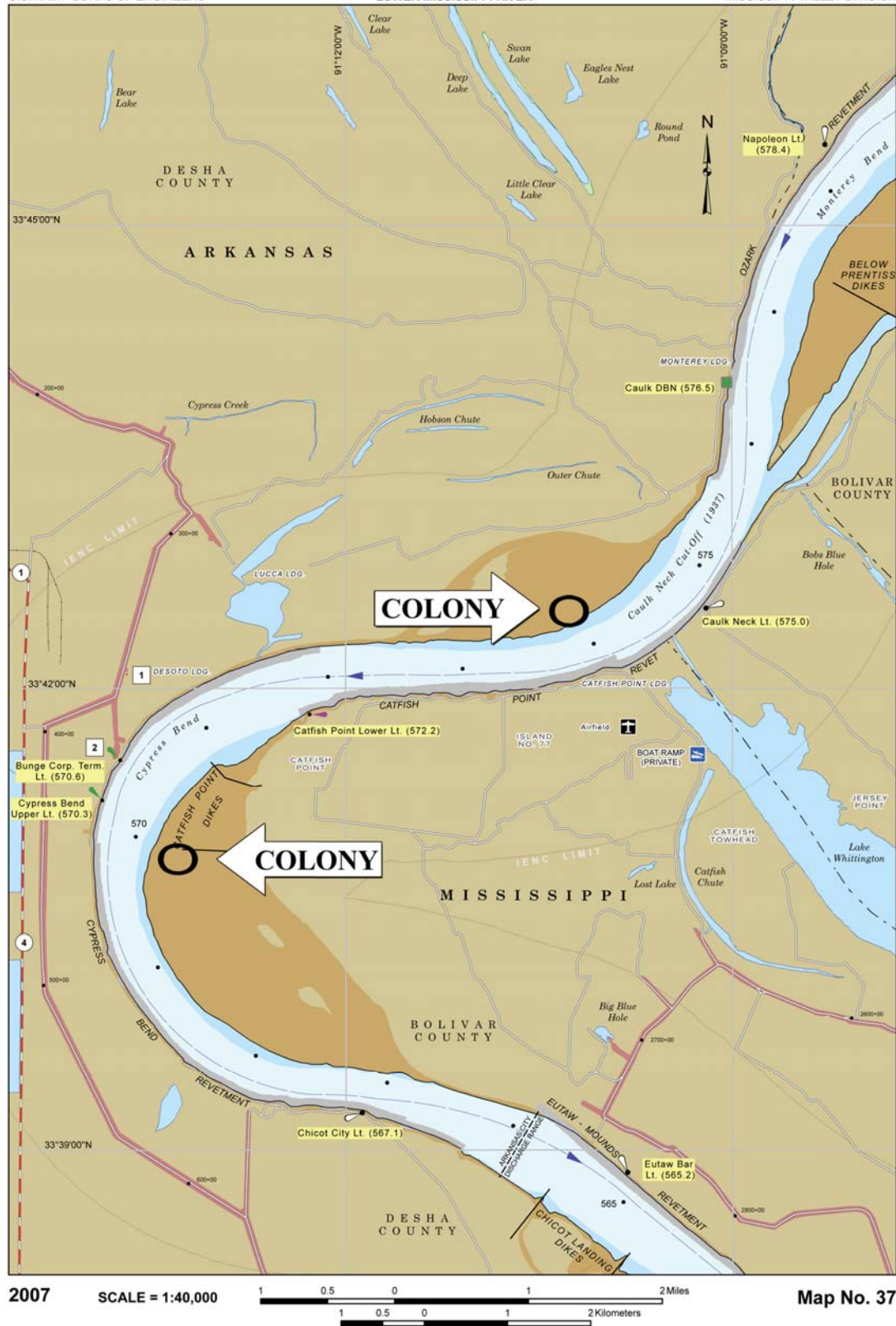
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 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-30



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-31



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-32



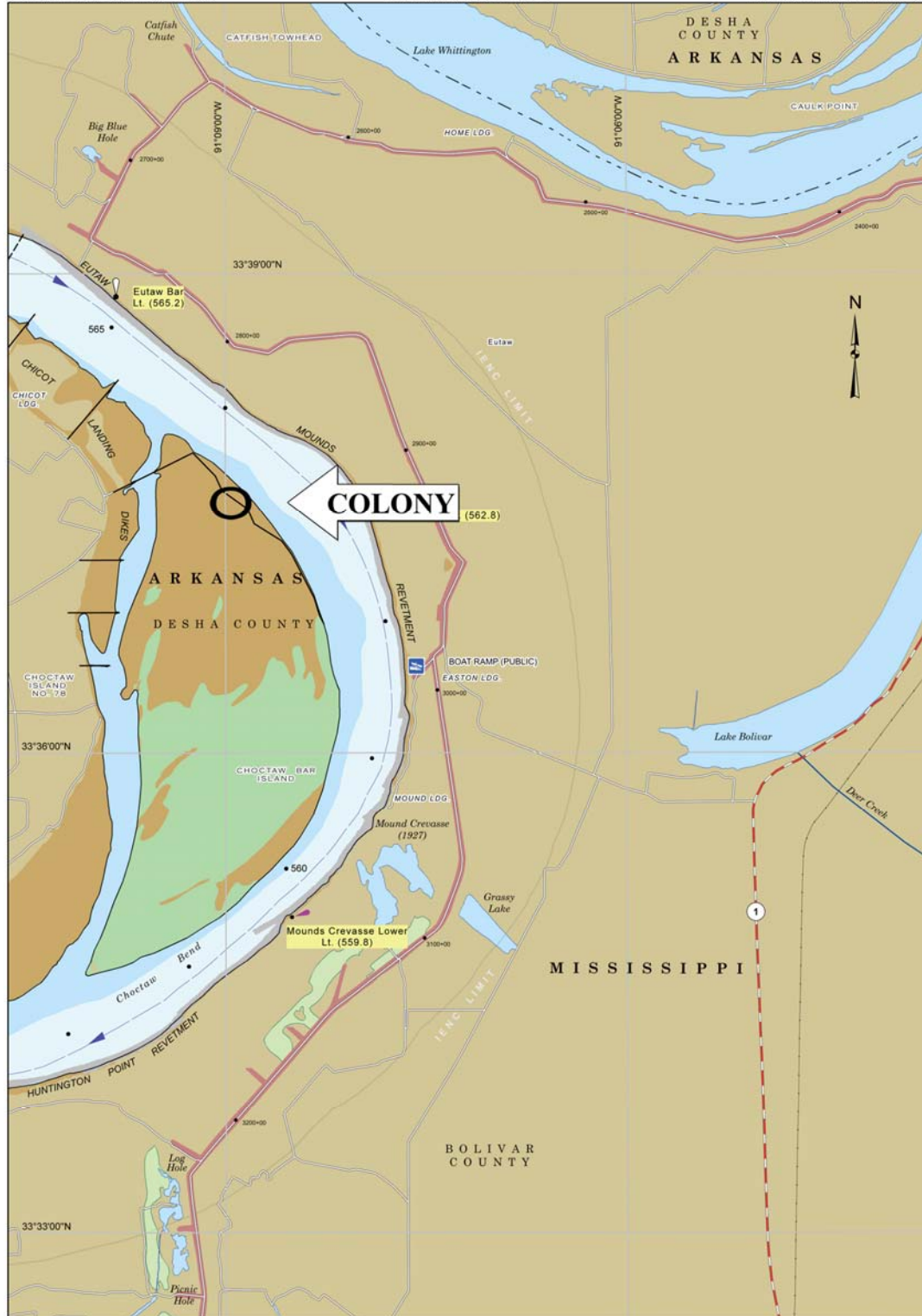
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Map No. 37

Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-33



2007

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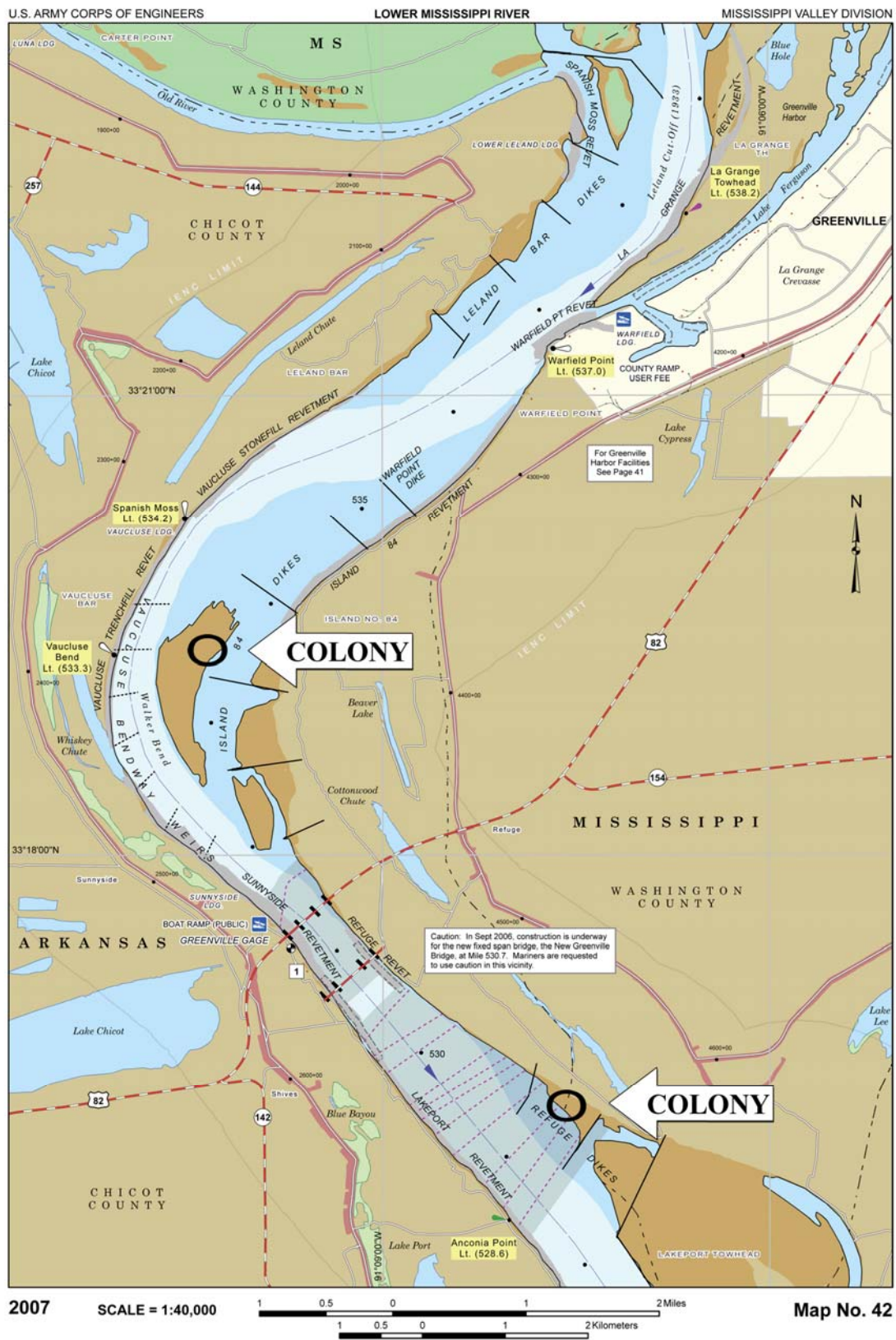


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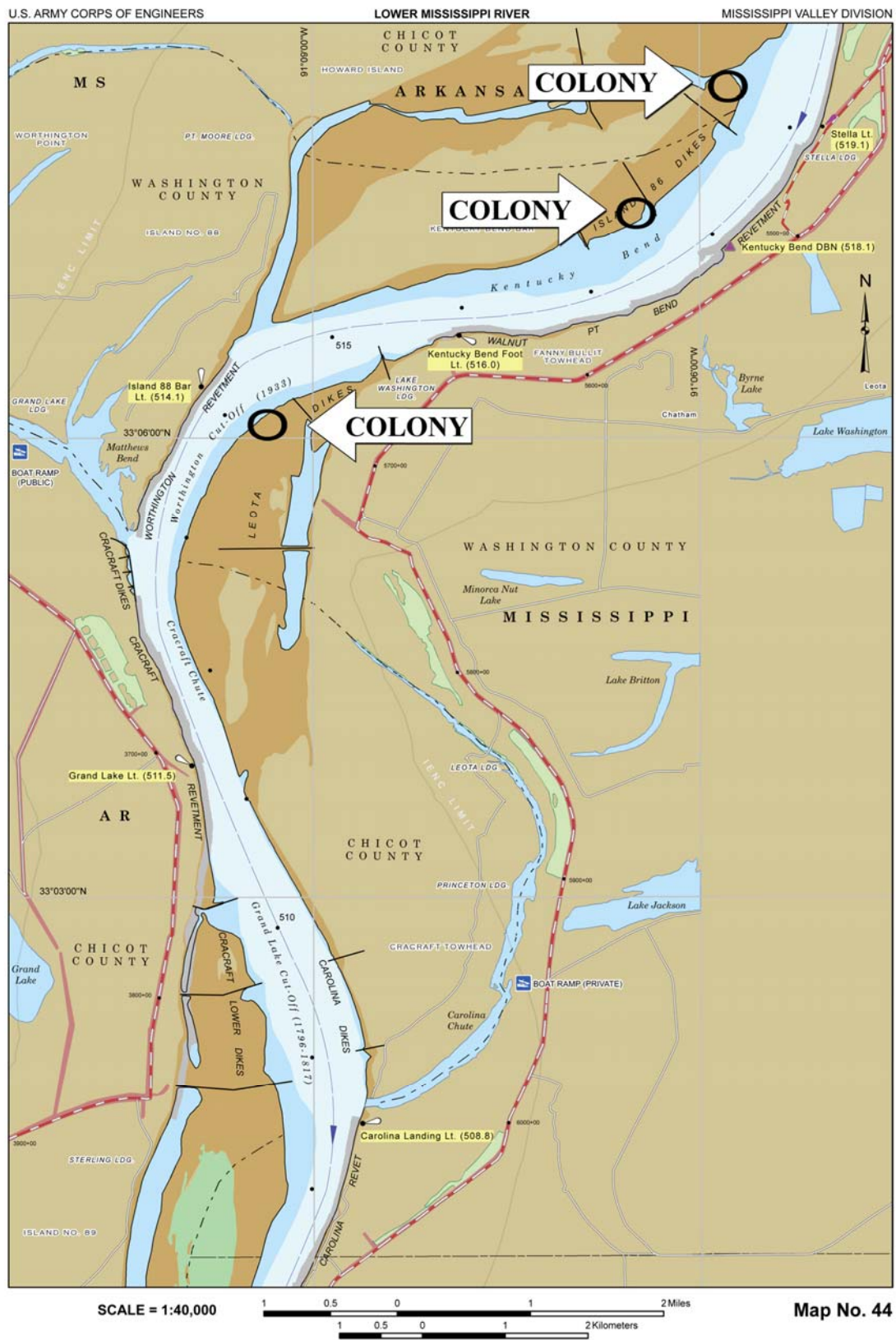
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 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-34



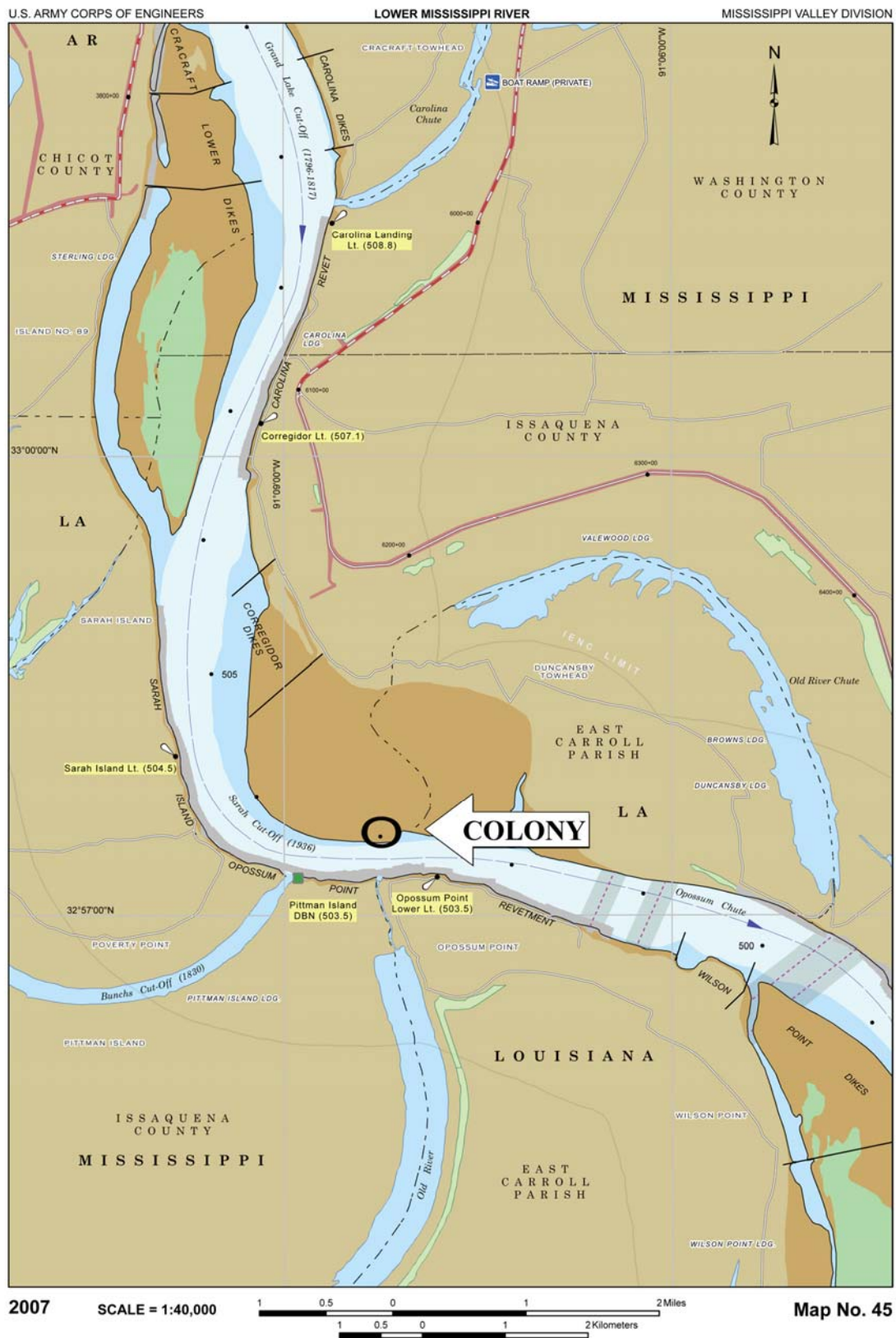
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 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-35



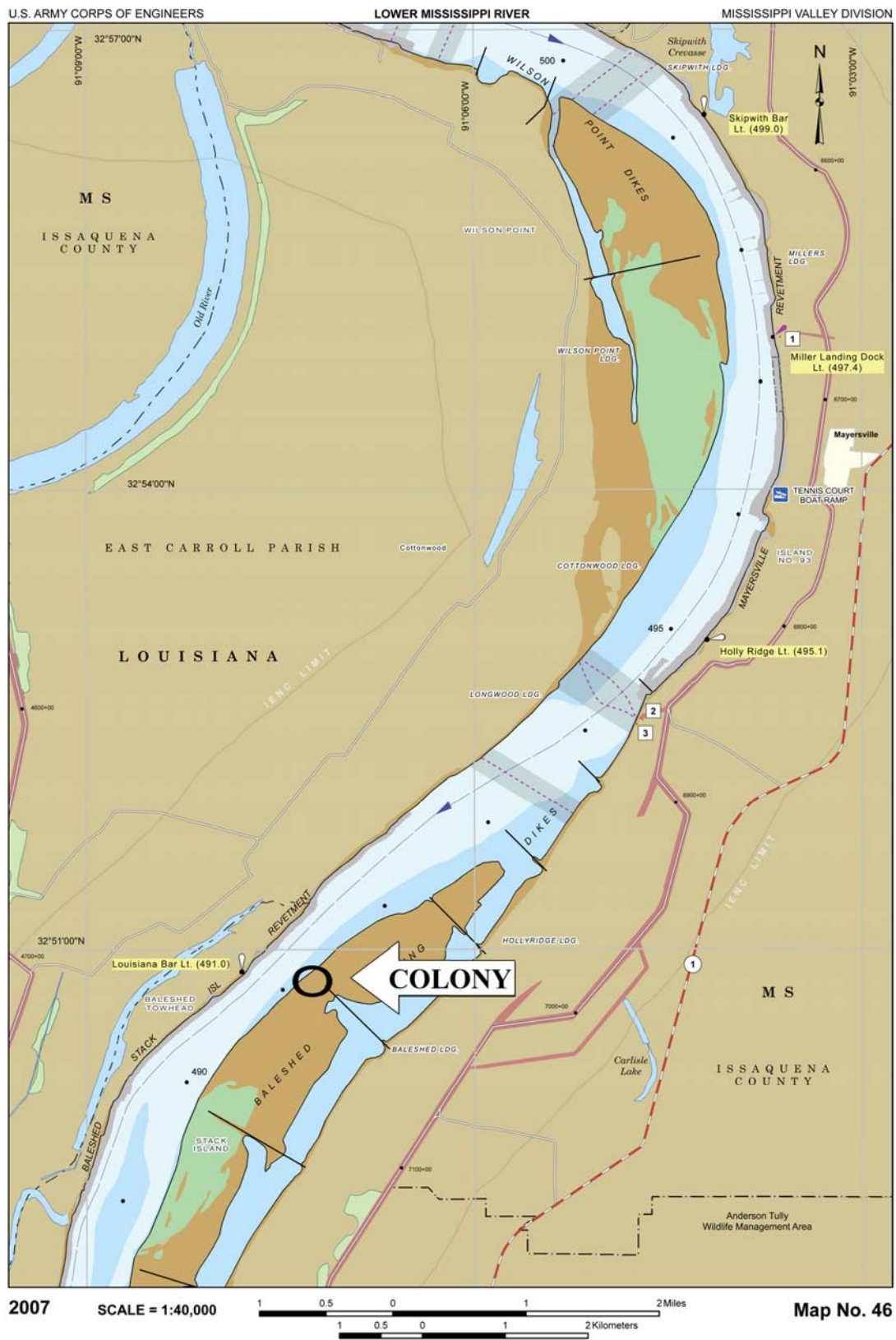
Least Tern Survey – 2009
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-36



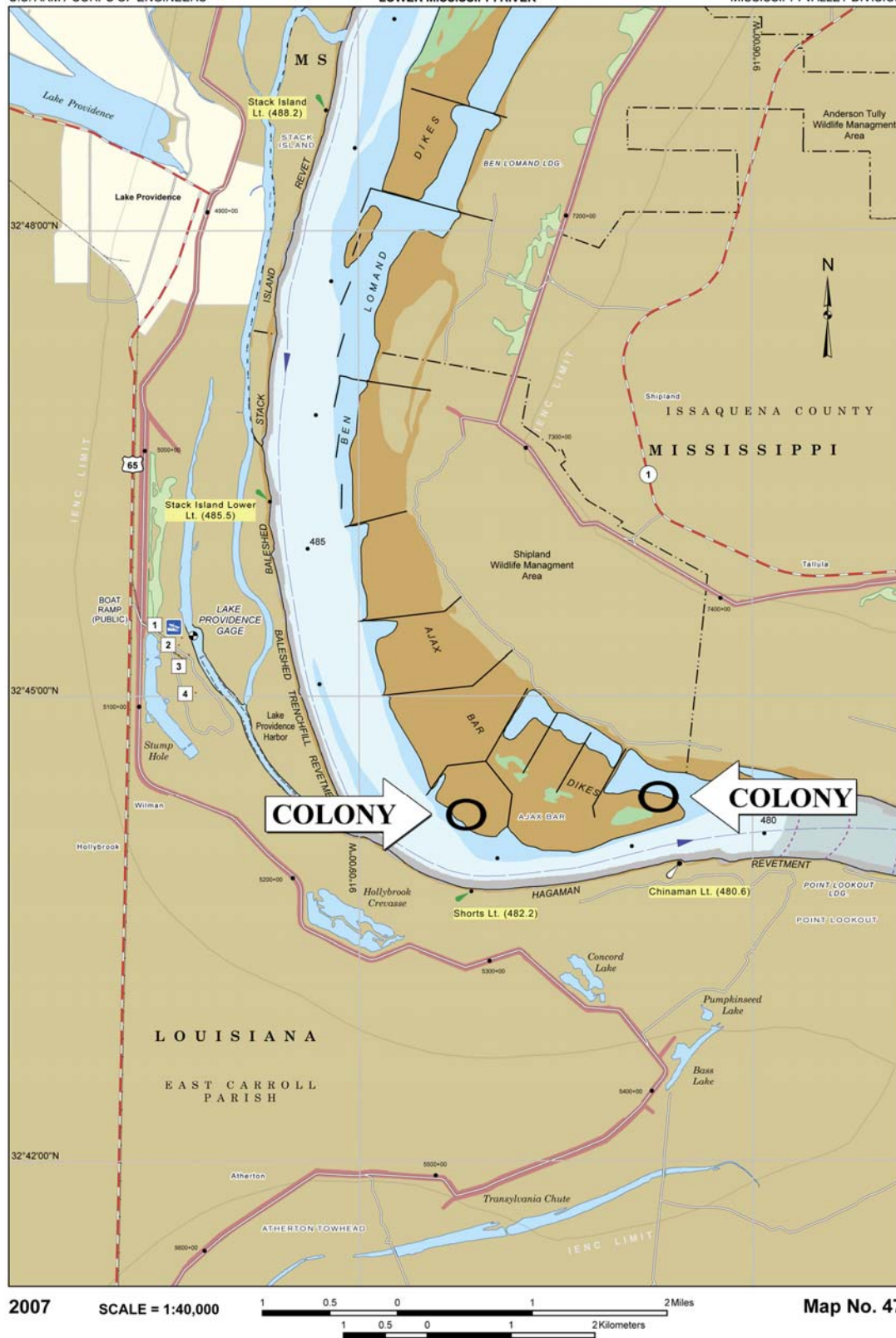
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-37



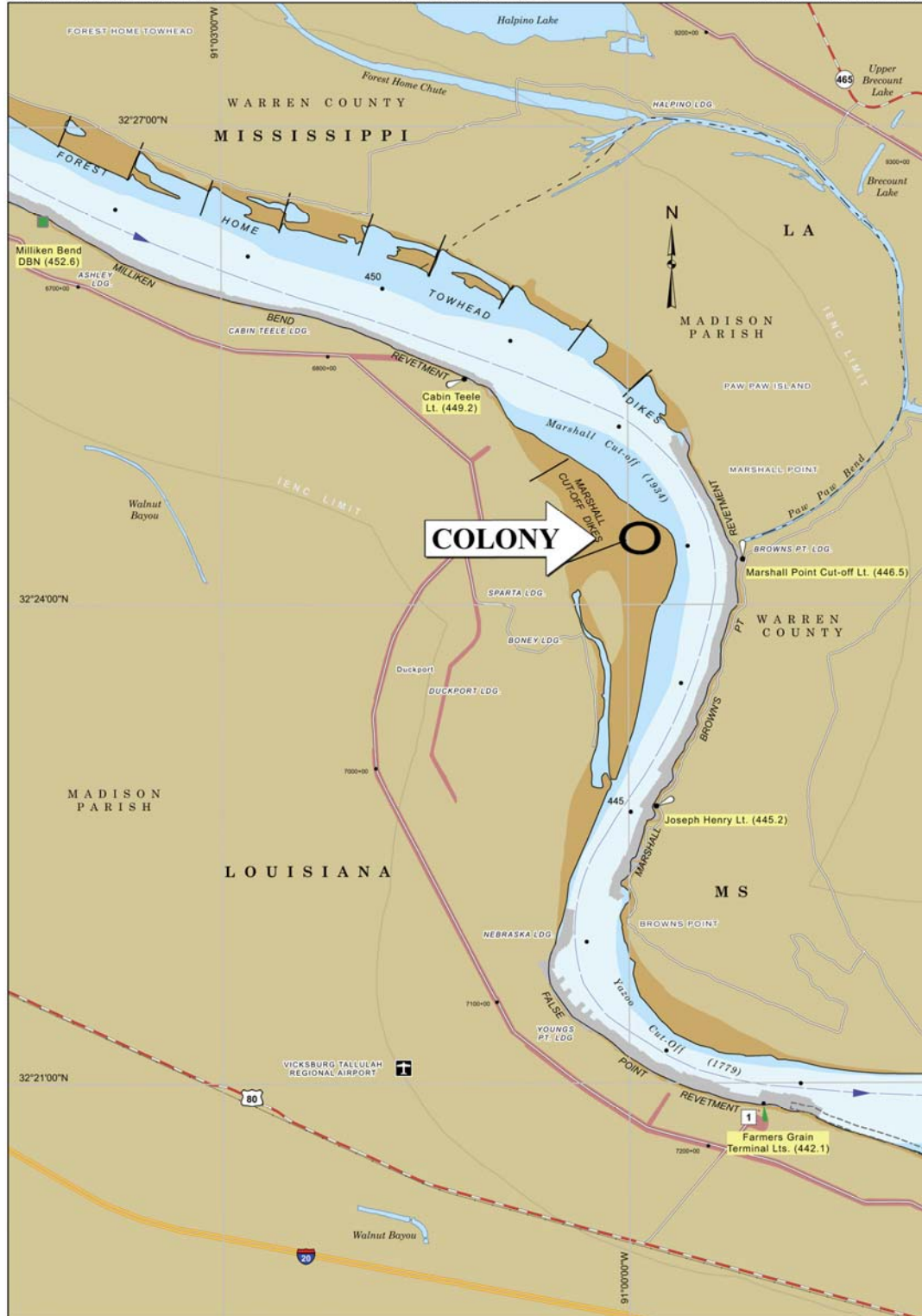
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-38



Least Tern Survey – 2009
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-39



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-40



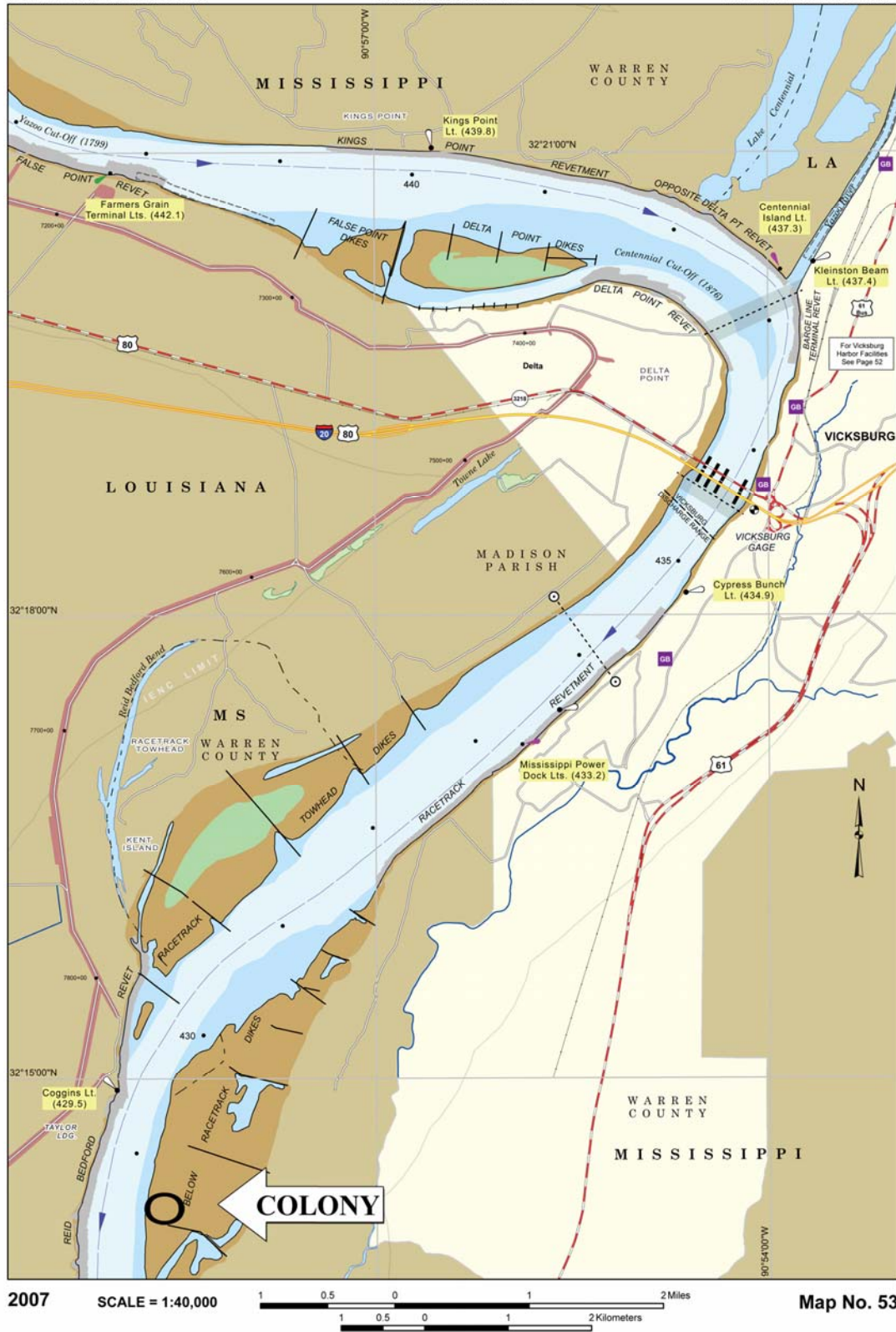
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Map No. 51

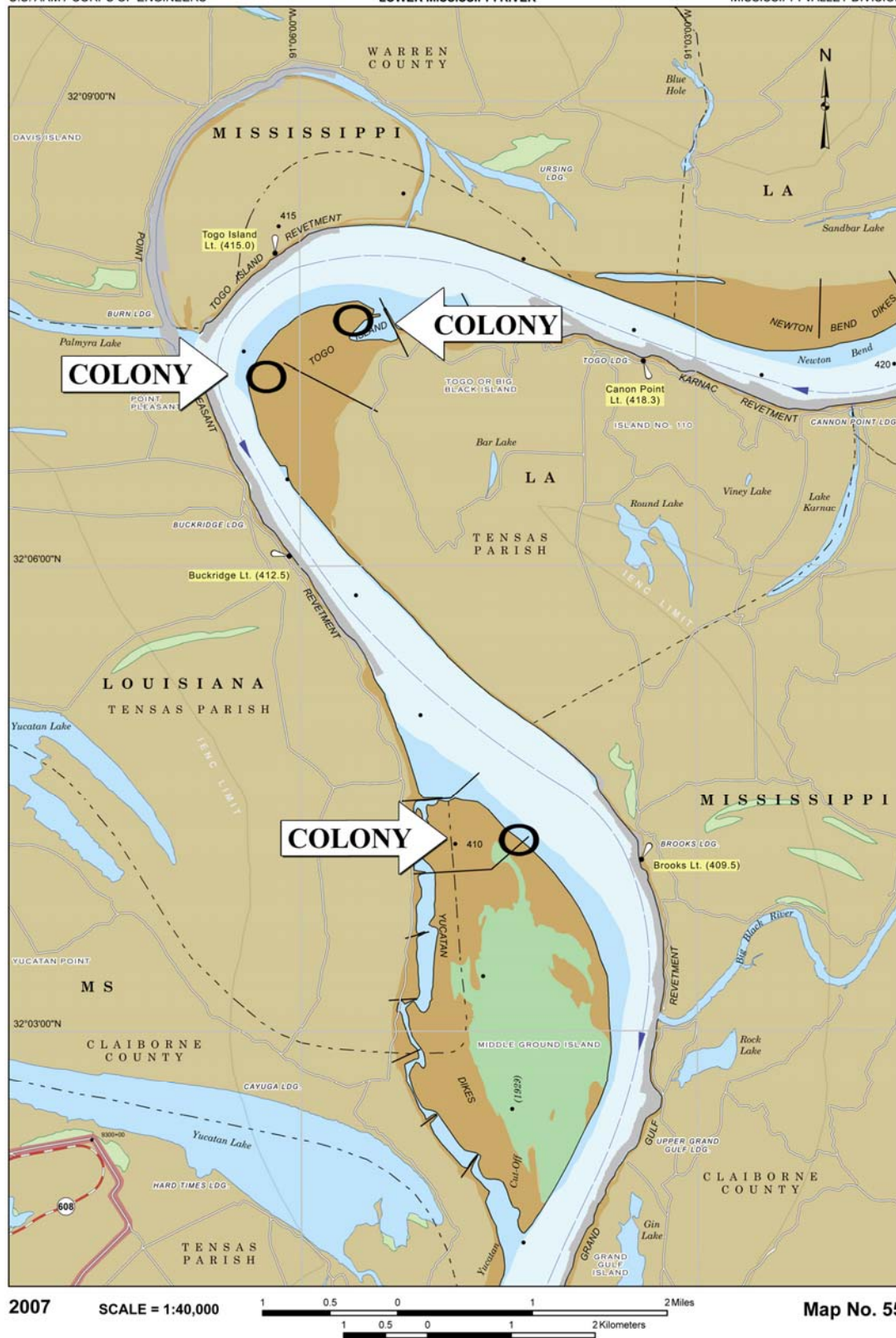
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-41



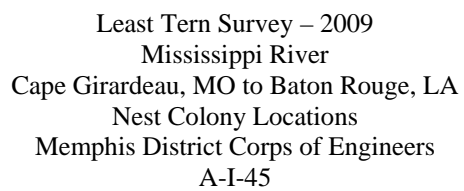
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 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-42

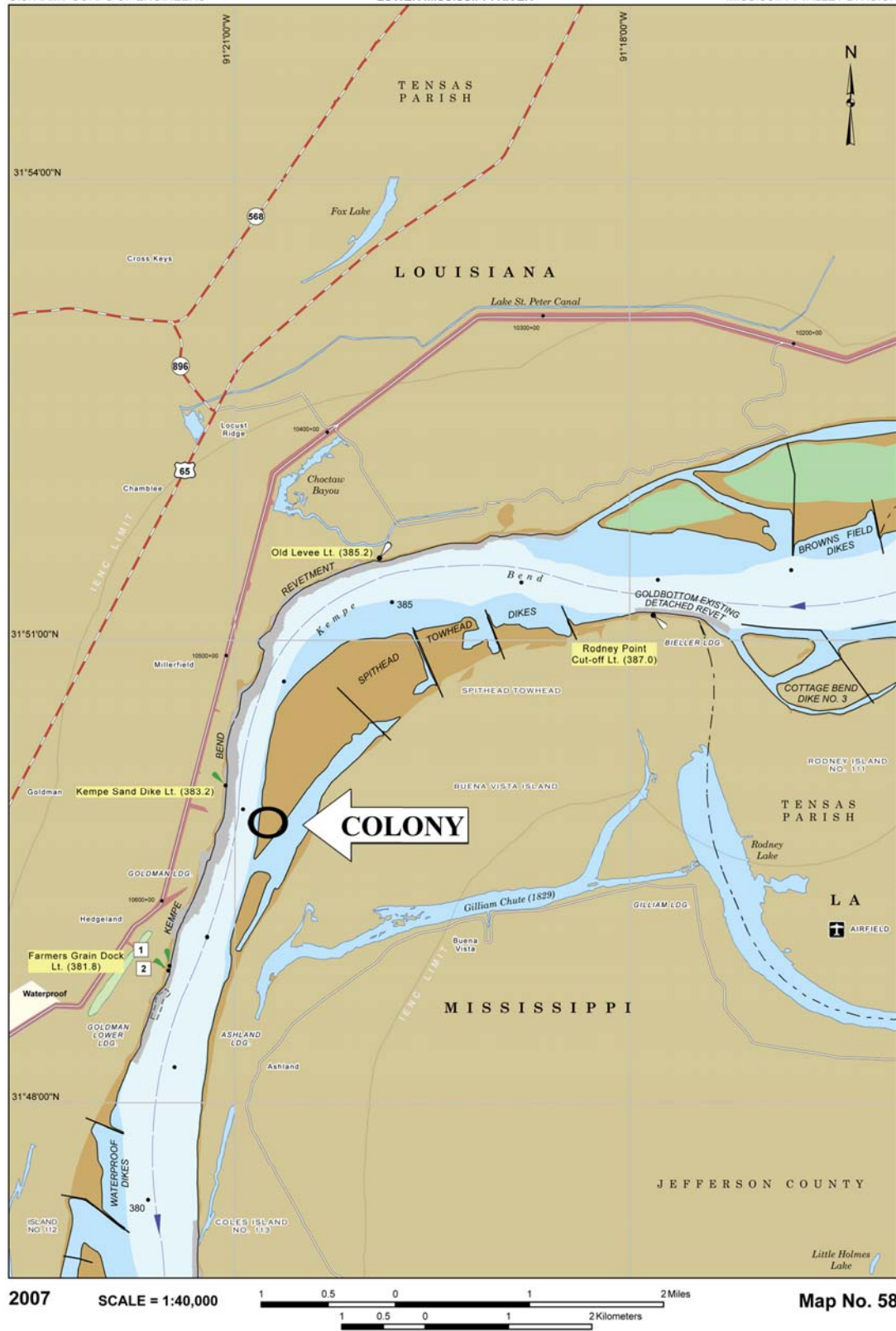


Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-43

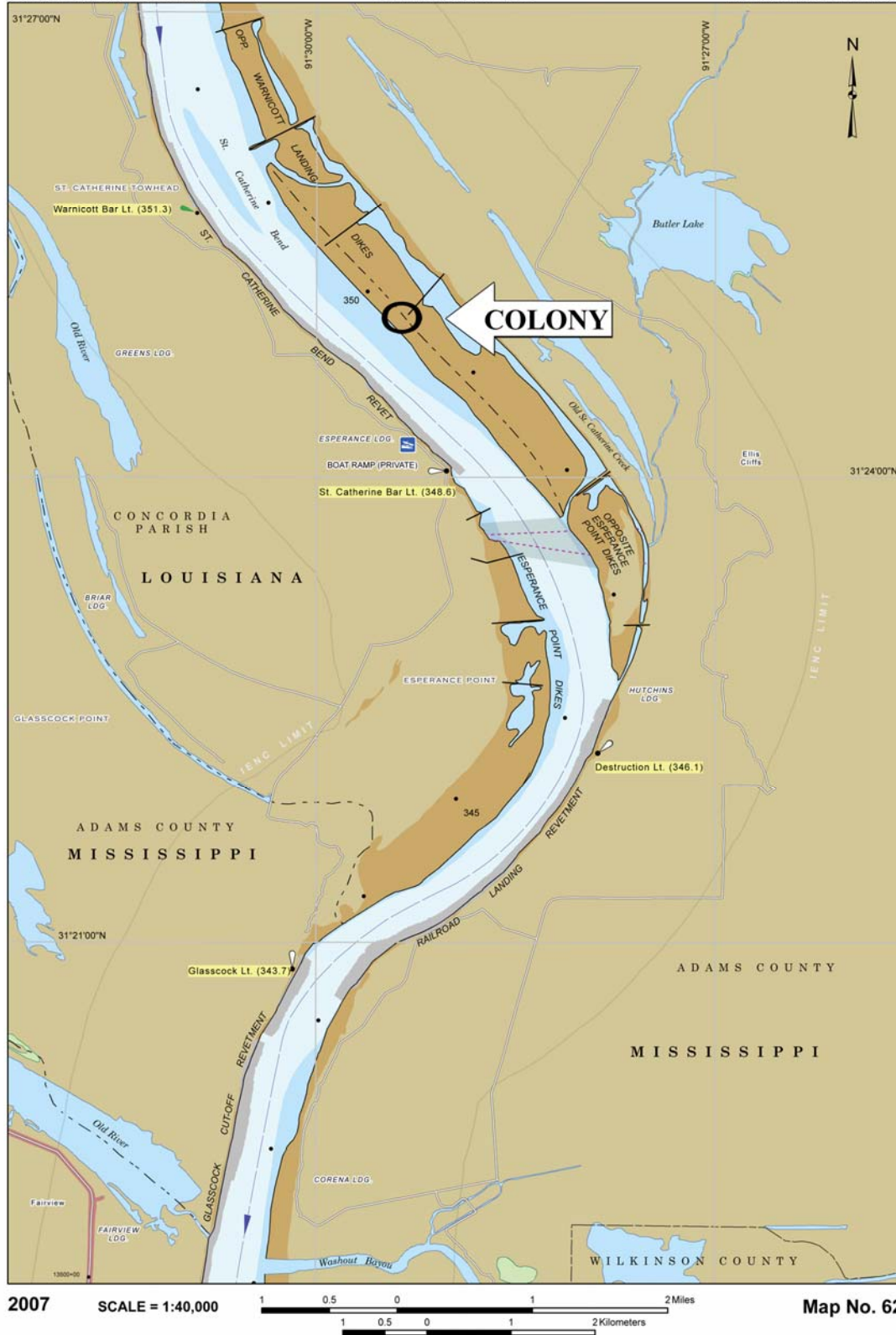


Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-44

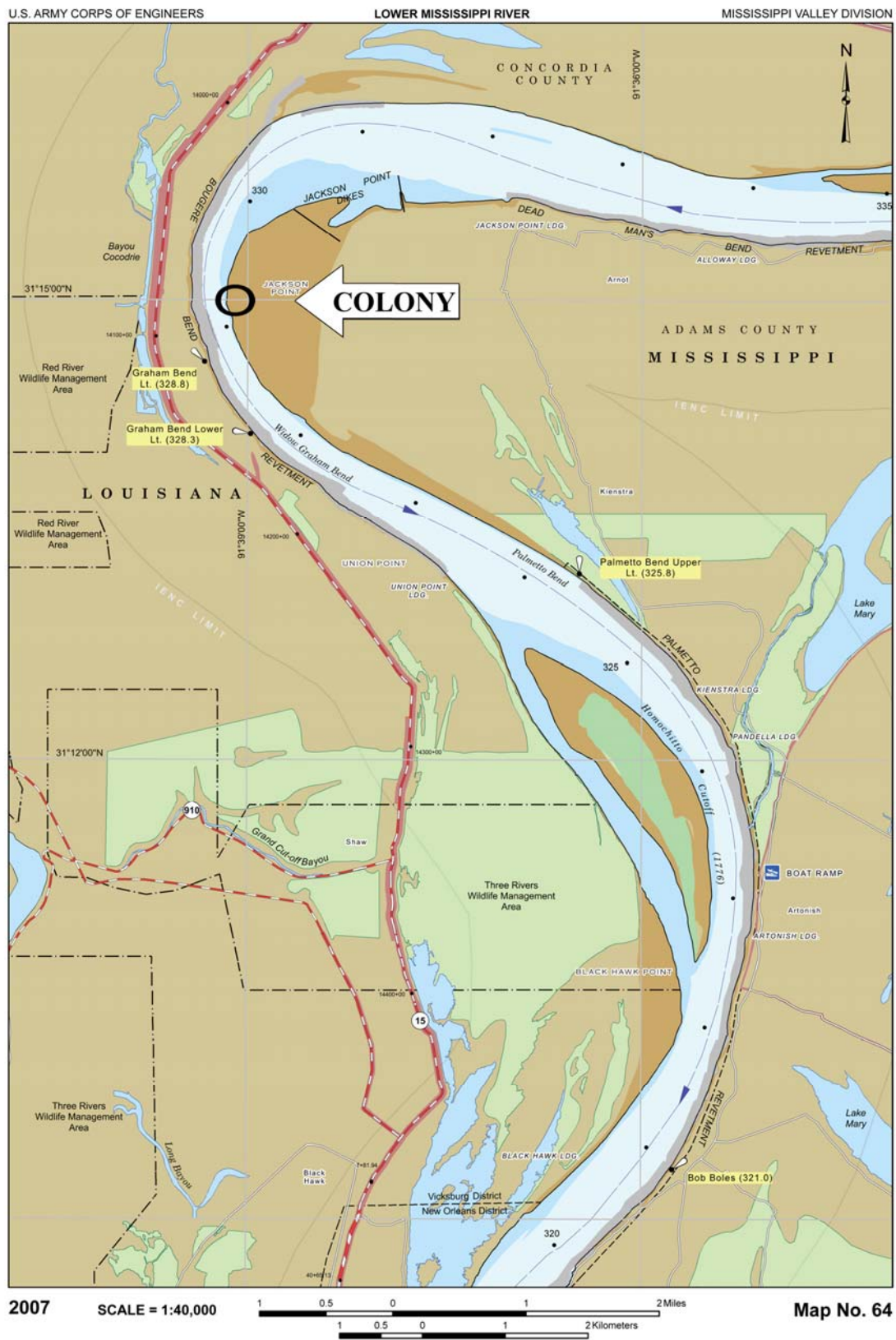




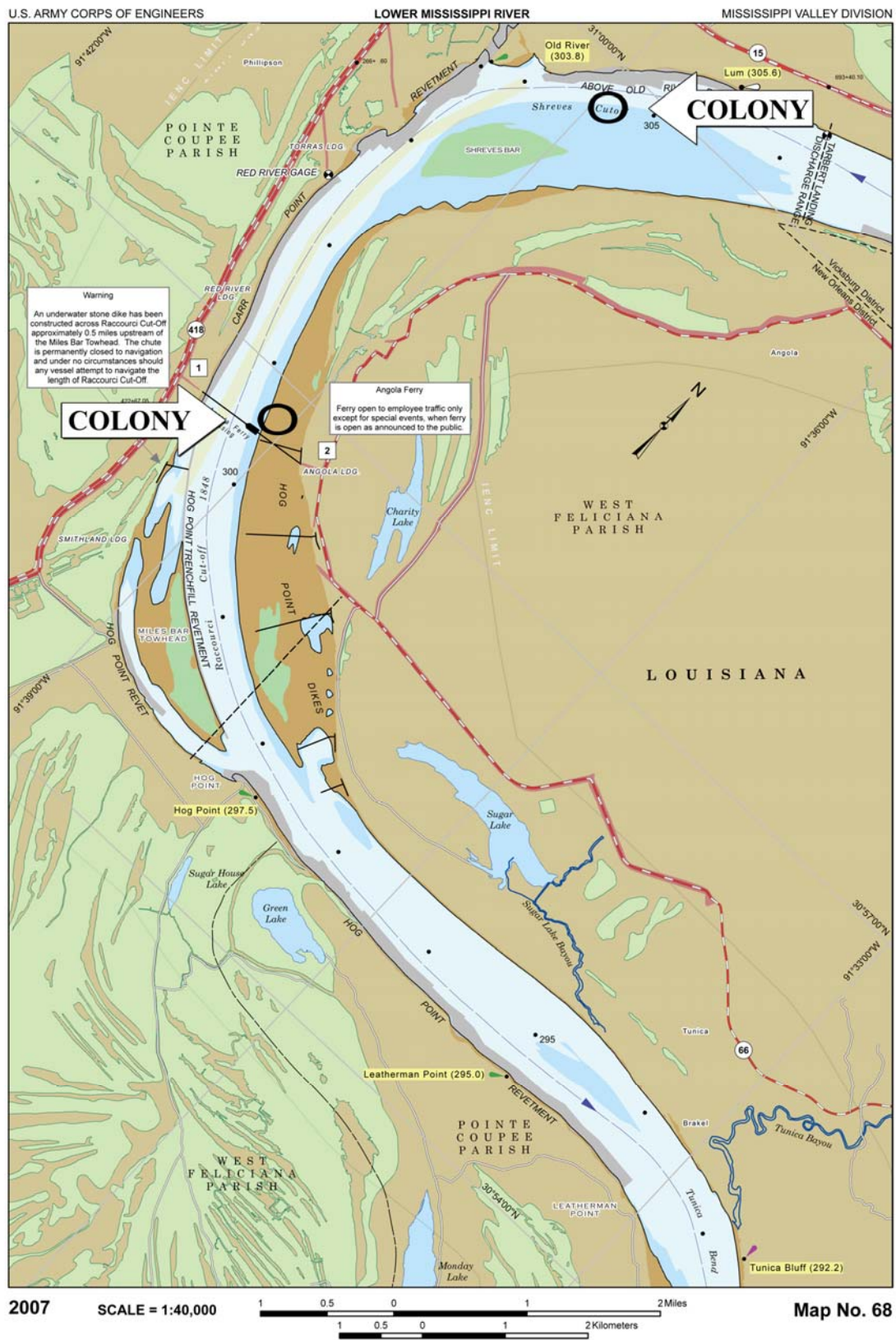
Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-46



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-47



Least Tern Survey – 2009
 Mississippi River
 Cape Girardeau, MO to Baton Rouge, LA
 Nest Colony Locations
 Memphis District Corps of Engineers
 A-I-48



Least Tern Survey – 2009
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-49

Appendix A – II

LEAST TERN SURVEY - 2009

**Mississippi River
Cape Girardeau, MO to Baton Rouge, LA**

SMALL BOAT SURVEY July 11 – 17, 2009

Memphis District, Corps of Engineers

Data Sheets

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 8:30 RIVER MILE UR 30.5

LOCALITY: Alexander IL SITE NAME: Bumgard Island
County/Parish State

WHERE SITED: Latitude: 37.04192
Longitude: 89.37755

Approximate Distance to Water: 800 Feet

NUMBERS SIGHTED:

Adults: 76
Juveniles:
Eggs: 2,3
Chicks: No

SUBSTRATE:

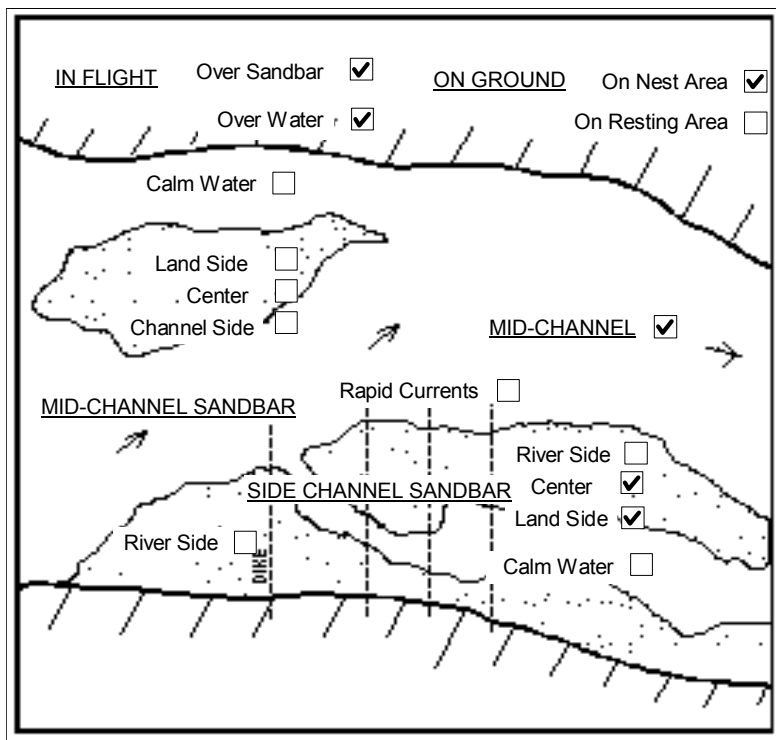
Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type: Willows/Cottonwoods
Distance: 200 Feet

FIELD CONDITION:

Temperature: 80 °F
Rain: Yes
Wind: 20 mph
% Cloud: 100



OTHER NOTES:

Left Bank. Flush count on unattached, medium-size sand and gravel bar, flat and gently undulating with no debris. Terns fishing opposite bank. Canine tracks and fingerling Carp present. Four nests observed.

IL side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Cape Girardeau = 23.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 10:27 RIVER MILE 946

LOCALITY: Carlisle KY SITE NAME: Island #1 Dikes
County/Parish State

WHERE SITED: Latitude: 36.88810
Longitude: 89.11768

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 133
Juveniles:
Eggs: 1,2,3
Chicks: No

SUBSTRATE:

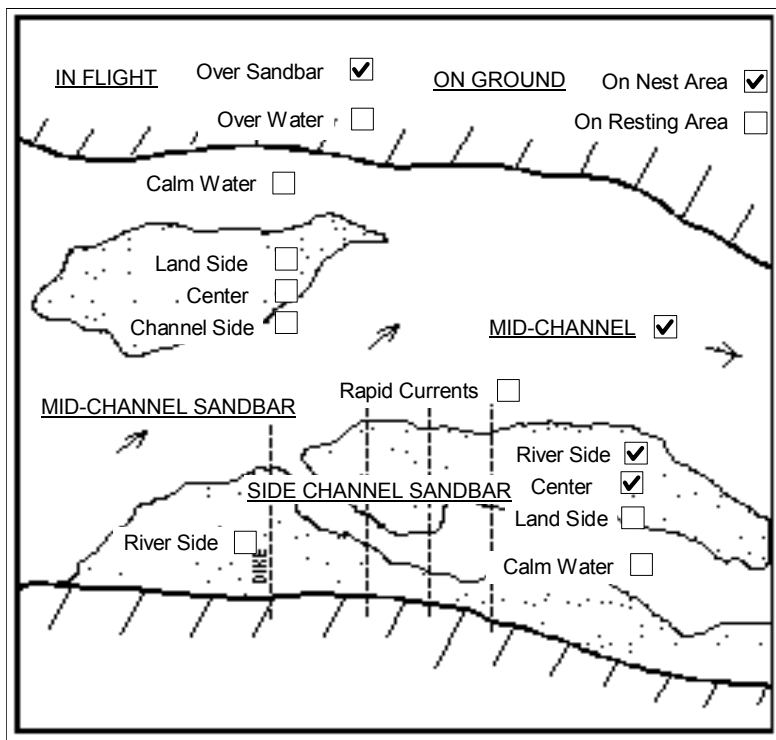
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 77 °F
Rain: No
Wind: 20 mph
% Cloud: 100



OTHER NOTES:

Left Bank. Flush count on unattached, long sand bar with most scrapes located on downstream point.
Terns mobbing Crow and 1 Great Blue Heron. Six nests with small Carp and Gizzard Shad in colony along with turtle nests.

KY side

OBSERVERS: Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Cairo = 22 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 11:15 RIVER MILE 940

LOCALITY: Carlisle KY SITE NAME: Below Campbell Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 4
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

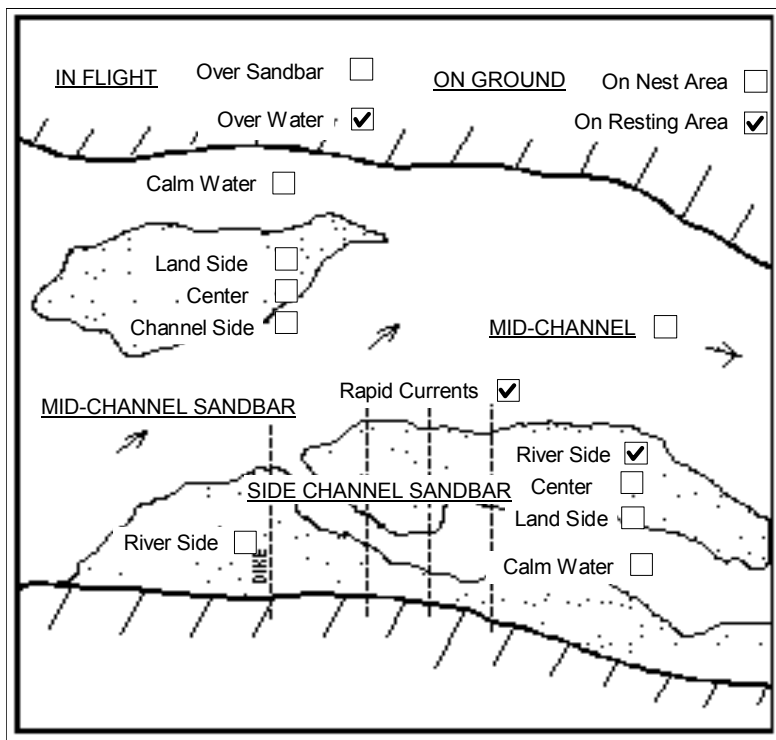
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 80 °F
Rain: No
Wind: 20 mph
% Cloud: 90



OTHER NOTES:

Left Bank. Perimeter count along small, low, flat sand bar (400 x 100 ft.), resting only along with 2 Hudsonian Godwits.

KY side

OBSERVERS: Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Cairo = 22 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 11:37 RIVER MILE 931.2

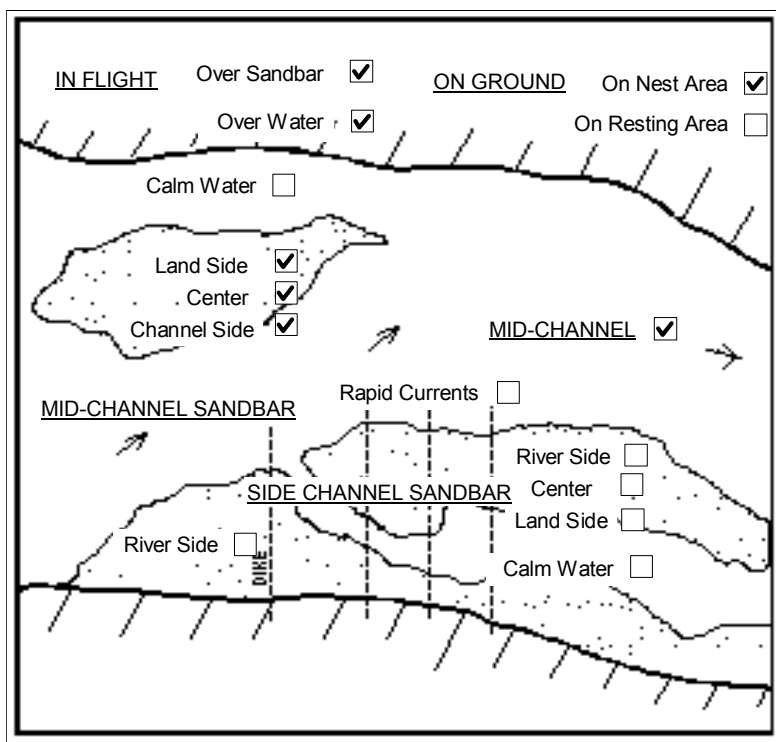
LOCALITY: Hickman KY SITE NAME: Wolf Island Bar
County/Parish State

WHERE SITED: Latitude: 36.70052
Longitude: 89.14998

Approximate Distance to Water: 500 Feet

NUMBERS SIGHTED:

Adults: 180
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 80 °F
Rain: No
Wind: 20 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Flush count on large, mid-channel, undulating, high, sand bar attached to hardpoints at upstream end. Kentucky Department of Fish and Wildlife Resources posted "keep out" signs along bars perimeter with many nests tagged with small sticks. Cliff Swallows, Great Blue Herons, and fingerling Carp also present.

KY side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Cairo = 22 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 13:20 RIVER MILE 929.7

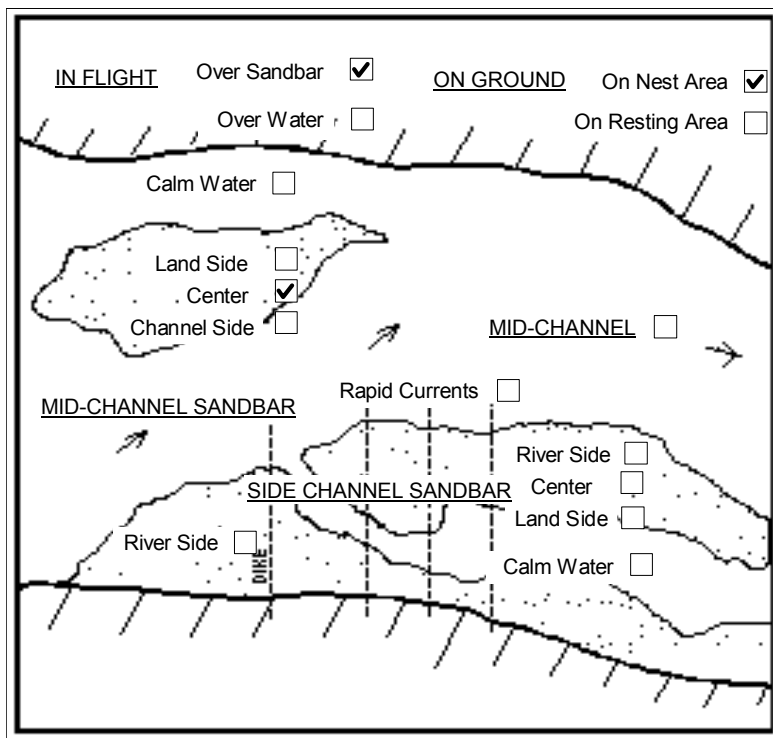
LOCALITY: Hickman KY SITE NAME: Williams Landing
County/Parish State

WHERE SITED: Latitude: 36.68500
Longitude: 89.14788

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 80
Juveniles:
Eggs: 1,2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: No
Wind: 15 mph
% Cloud: 75

OTHER NOTES:

Left Bank. Flush count on low, flat, unattached, bar with colony concentrated centrally on upstream and downstream points. Fish trap with catfish at the waterline along with 2 Black Terns.

KY side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Cairo = 22 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 13:40 RIVER MILE 924.8

LOCALITY: Hckman KY SITE NAME: Beckwith Bend
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 5
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

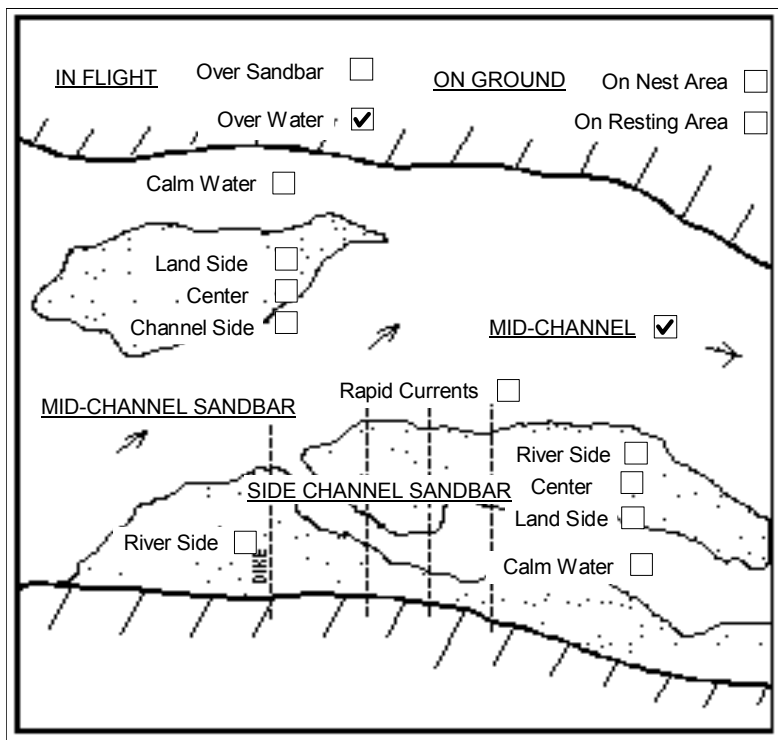
Sand: ☐
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 87 °F
Rain: No
Wind: 20 mph
% Cloud: 90



OTHER NOTES:

Left Bank. Terns in transit over water.

KY side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Cairo = 22 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 14:00 RIVER MILE 920.5

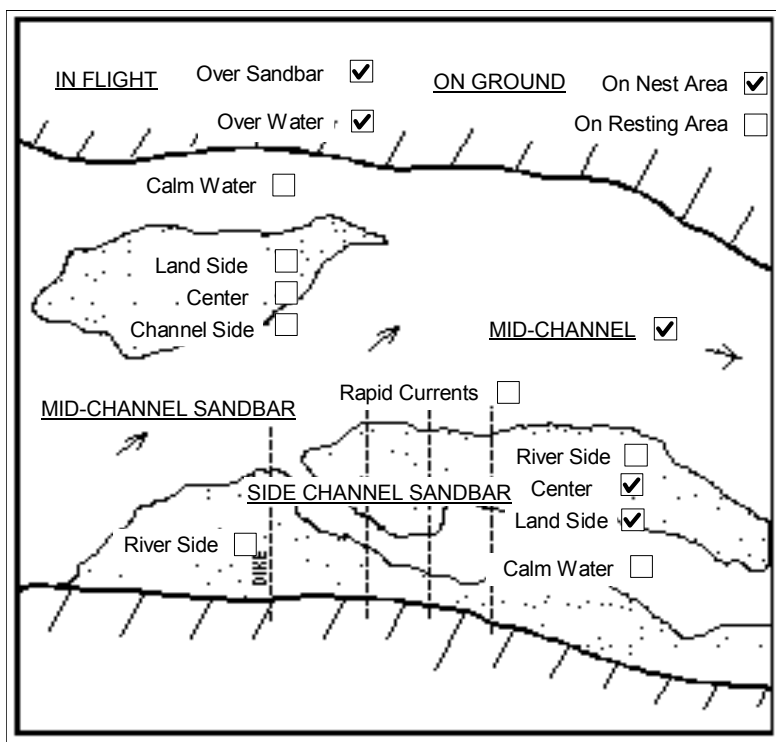
LOCALITY: Mississippi MO SITE NAME: Hickman Bend
County/Parish State

WHERE SITED: Latitude: 35.56813
Longitude: 89.24342

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 209
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 20 mph
% Cloud: 90

OTHER NOTES:

Right Bank. Flush count on low, unattached, medium elevation bar (1 mile long) with some gravel (35%).
Two nests with 2 and 3 eggs counted. Many terns carrying fish also large swallow colony resting on bar.

MO side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Cairo = 22 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 14:49 RIVER MILE 909

LOCALITY: Fulton KY SITE NAME: Mable Landing
County/Parish State

WHERE SITED: Latitude: 36.54803
Longitude: 89.39751

Approximate Distance to Water: 250 Feet

NUMBERS SIGHTED:

Adults: 243
Juveniles:
Eggs: 1,2
Chicks: No

SUBSTRATE:

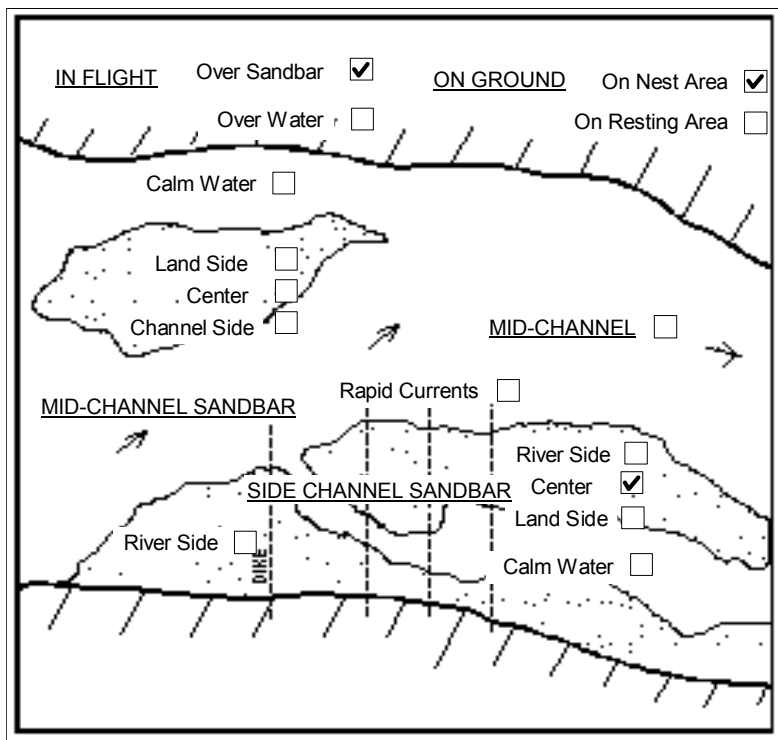
Sand: ☐
Gravel: ☒
Debris: ☐

VEGETATION:

Type: Willows/Cottonwoods
Distance: 500 Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 10 mph
% Cloud: 80



OTHER NOTES:

Left Bank. Flush count on attached, high elevation, gravel bar with 7 nests and many terns courting, carrying fish, and resting at waterline. Raccoon, deer, and heron tracks near treeline.

KY side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Cairo = 22 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 16:30 RIVER MILE 884

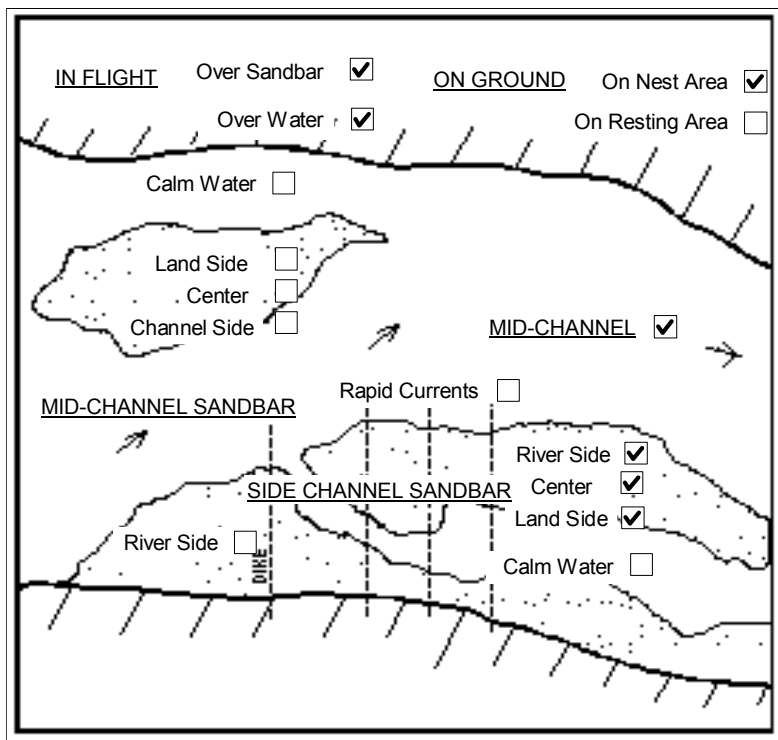
LOCALITY: Fulton KY SITE NAME: Kentucky Point Dikes
County/Parish State

WHERE SITED: Latitude: 36.51769
Longitude: 89.55204

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 312
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 100 Feet

FIELD CONDITION:

Temperature: 86 °F
Rain: No
Wind: 10 mph
% Cloud: 65

OTHER NOTES:

Left Bank. Unattached sand bar, medium to high elevation. Colony over 1 mile in width with Kentucky "Keep Out" signs posted along perimeter. Many birds and 10+ nests, some courting and resting at waterline. Flush count yields 312 adults and 21 Black Terns.

KY side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: New Madrid = 13.5 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 17:07 RIVER MILE 876.0

LOCALITY: Lake TN SITE NAME: Marr Towhead
County/Parish State

WHERE SITED: Latitude: 36.42100
Longitude: 89.53786

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 38
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

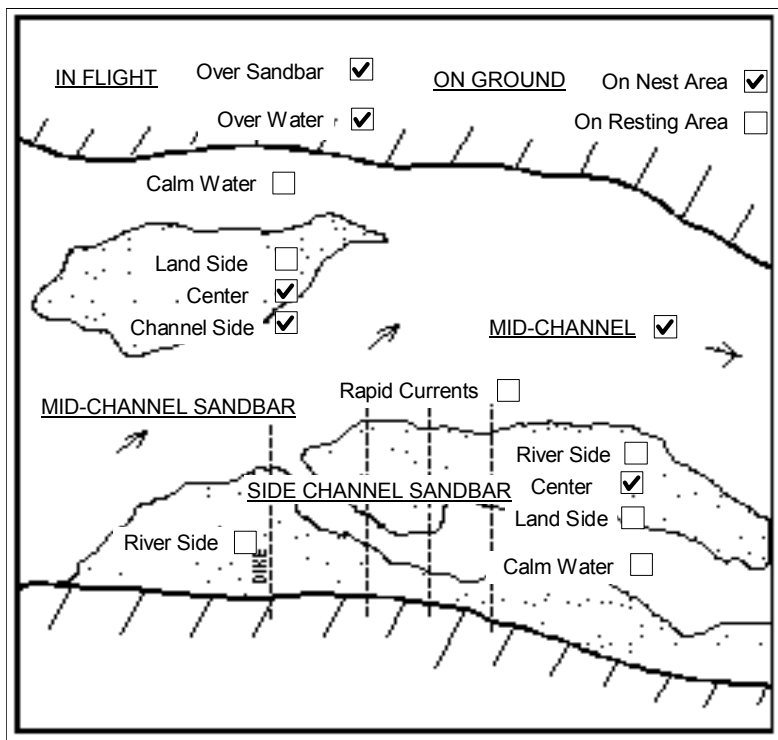
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 88 °F
Rain: No
Wind: 10 mph
% Cloud: 60



OTHER NOTES:

Left Bank. Low, unattached, clean sand bar. Perimeter count yields 38 adults with 3 sitting on nests.
Terns fishing opposite bank and back chute.

TN side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: New Madrid = 13.5 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 17:24 RIVER MILE 871.5

LOCALITY: New Madrid MO SITE NAME: Stewart Towhead Dikes Upper
County/Parish State

WHERE SITED: Latitude: 36.36334
Longitude: 89.51280

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 72
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

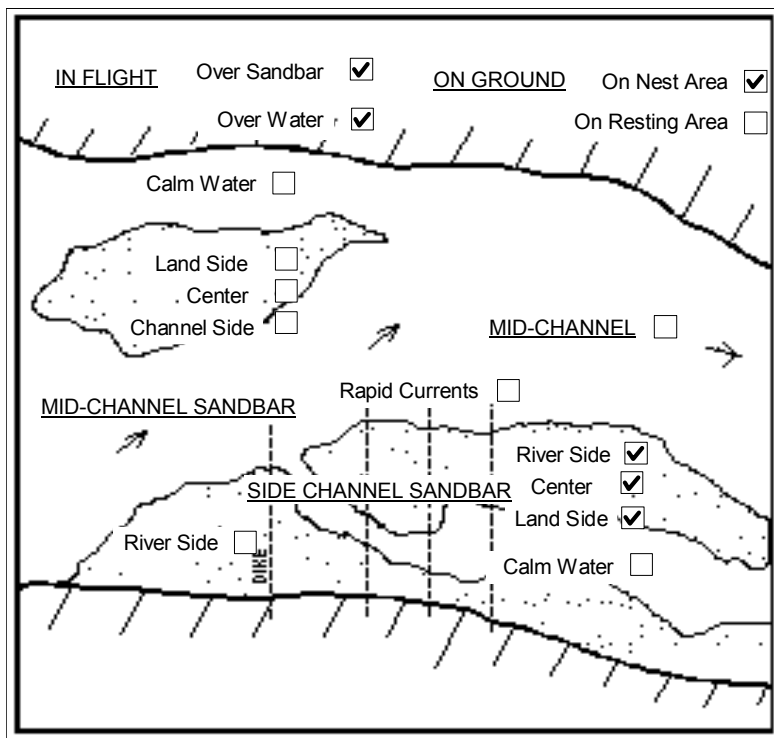
Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 88 °F
Rain: No
Wind: 10 mph
% Cloud: 65



OTHER NOTES:

Right Bank. Perimeter count along long, narrow, high, unattached, undulating, clean bar with turtle tracks.
Fifty observed sitting inland on nests.

MO side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 16.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 17:30 RIVER MILE 870.0

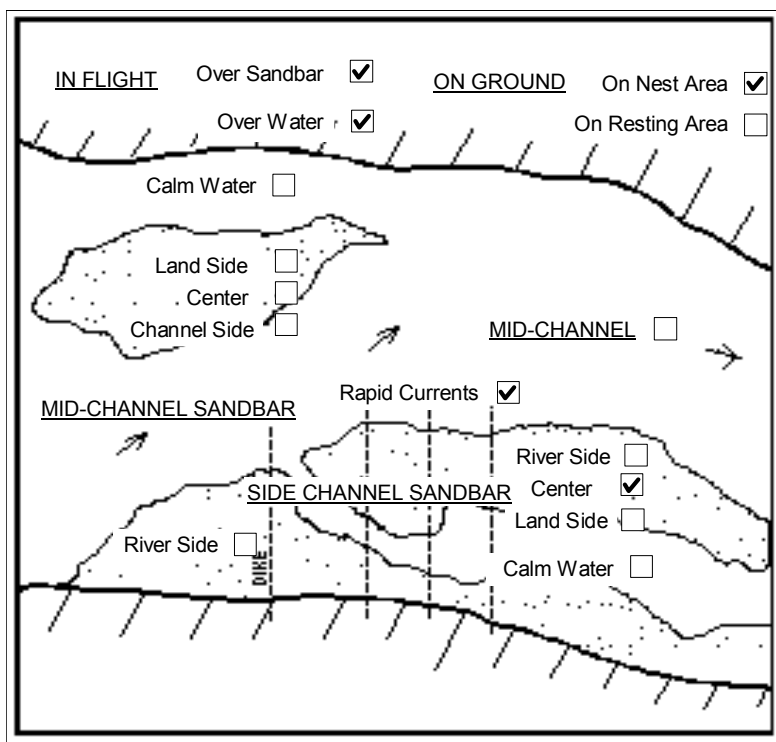
LOCALITY: New Madrid MO SITE NAME: Stewart Towhead Dikes Lower
County/Parish State

WHERE SITED: Latitude: 36.35266
Longitude: 89.51883

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 62
Juveniles: _____
Eggs: _____
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type: _____
Distance: _____ Feet

FIELD CONDITION:

Temperature: 88 °F
Rain: No
Wind: 10 mph
% Cloud: 65

OTHER NOTES:

Right Bank. Low, hard-packed, sand and gravel bar. One Great Blue Heron at the waterline.

MO side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 16.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 18:00 RIVER MILE 863.5

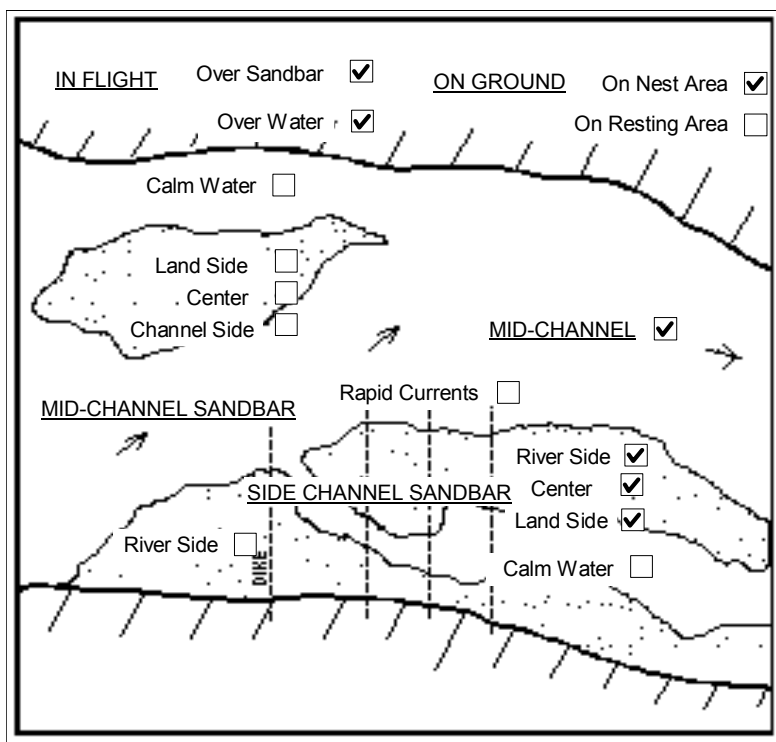
LOCALITY: Lake TN SITE NAME: Below Cherokee Dikes
County/Parish State

WHERE SITED: Latitude: 36.32014
Longitude: 89.61528

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 31
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 88 °F
Rain: No
Wind: 10 mph
% Cloud: 65

OTHER NOTES:

Left Bank. Attached, very large, broad, gently-sloping, mid-elevation bar of solid sand extending for several miles. Many ATV tracks and White Pelicans resting in back chute.

TN side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 16.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 18:25 RIVER MILE 857.0

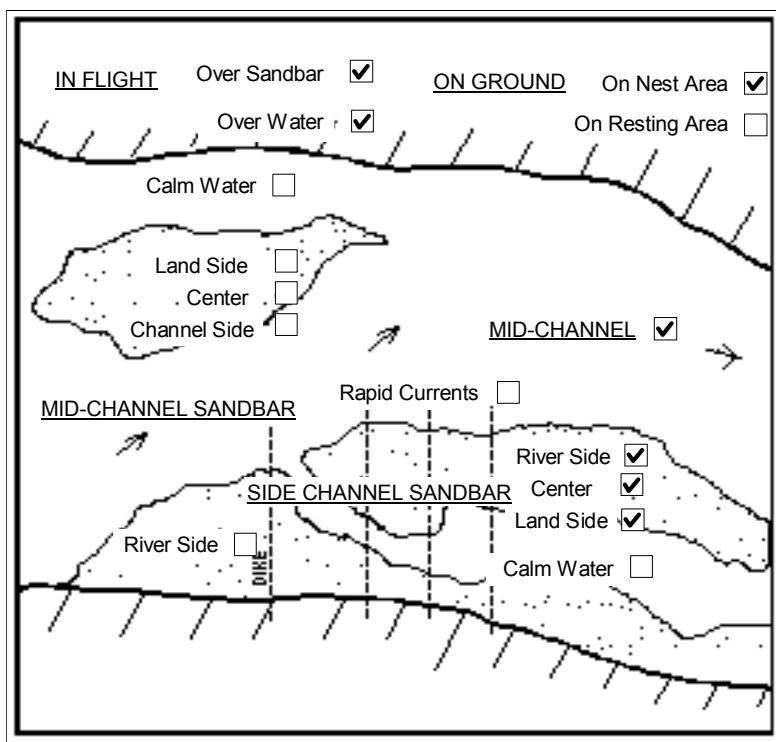
LOCALITY: Pemiscott MO SITE NAME: Chute of Island 14
County/Parish State

WHERE SITED: Latitude: 36.24564
Longitude: 89.57816

Approximate Distance to Water: 50 Feet

NUMBERS SIGHTED:

Adults: 250
Juveniles:
Eggs: 3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 87 °F
Rain: No
Wind: 10 mph
% Cloud: 65

OTHER NOTES:

Right Bank. Unattached, high, medium-size, undulating sand bar with colony about 1/2 mile in length. Many nests with eggs and scrapes in patches of sand surrounded by gravel. Turtle tracks and evidence of human intrusion (lens cap found). Flush count.

MO side

OBSERVERS: Fowlkes, Thron Grubaugh

RIVER GAGE READING: Caruthersville = 16.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/11/2009 TIME OF DAY: 18:50 RIVER MILE 846.3

LOCALITY: Lake TN SITE NAME: Opp. Caruthersville Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 7
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

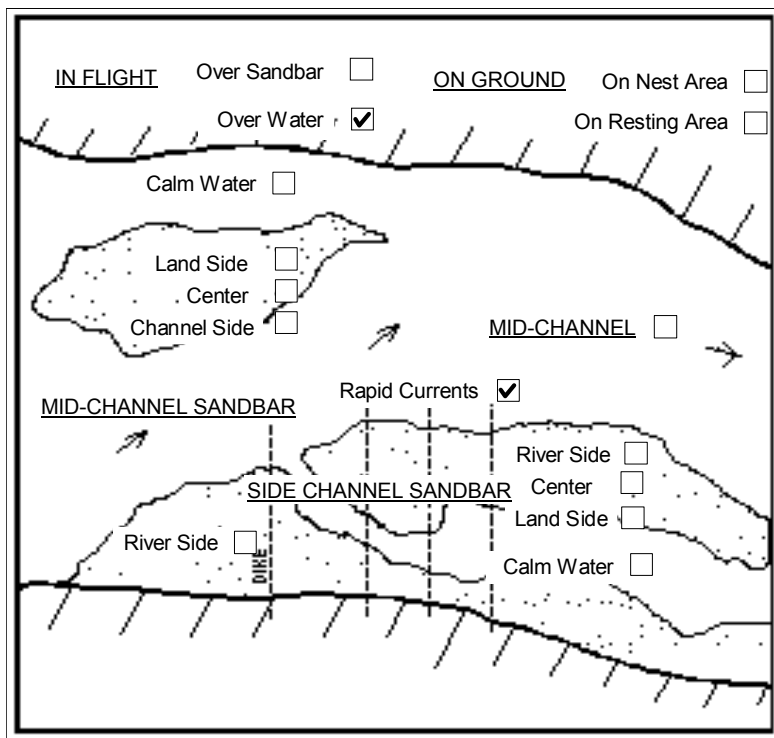
Sand: ☐
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 87 °F
Rain: No
Wind: 10 mph
% Cloud: 65



OTHER NOTES:

Left Bank. Small, undulating, sand bar upstream from Blaker Towhead between dikes. Day campers present. Seven terns observed feeding along waterline.

TN side

OBSERVERS: Boyd, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 16.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 9:00 RIVER MILE 837

LOCALITY: Dyer TN SITE NAME: Island #18 Towhead Dikes
County/Parish State

WHERE SITED: Latitude: 36.09847
Longitude: 89.66160

Approximate Distance to Water: 300 Feet

NUMBERS SIGHTED:

Adults: 92

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type: Willows

Distance: 1000 Feet

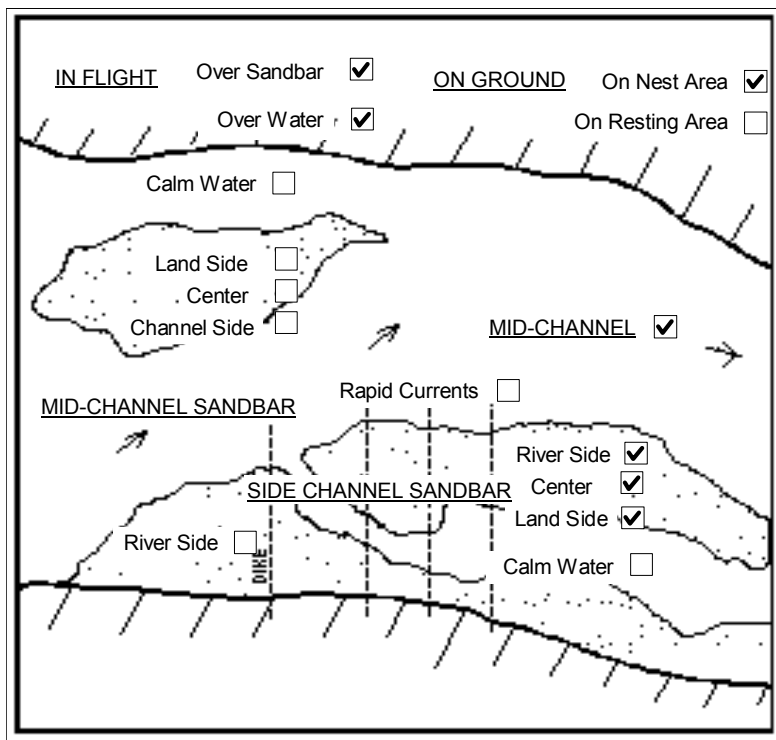
FIELD CONDITION:

Temperature: 84 °F

Rain: No

Wind: 5 mph

% Cloud: 100



OTHER NOTES:

Left Bank. Perimeter count along unattached, medium size, low, solid sand bar with colony on upstream end. Many Great Blue Herons at the waterline.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 9:30 RIVER MILE 830

LOCALITY: Pemiscott MO SITE NAME: Island #20 Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 6
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

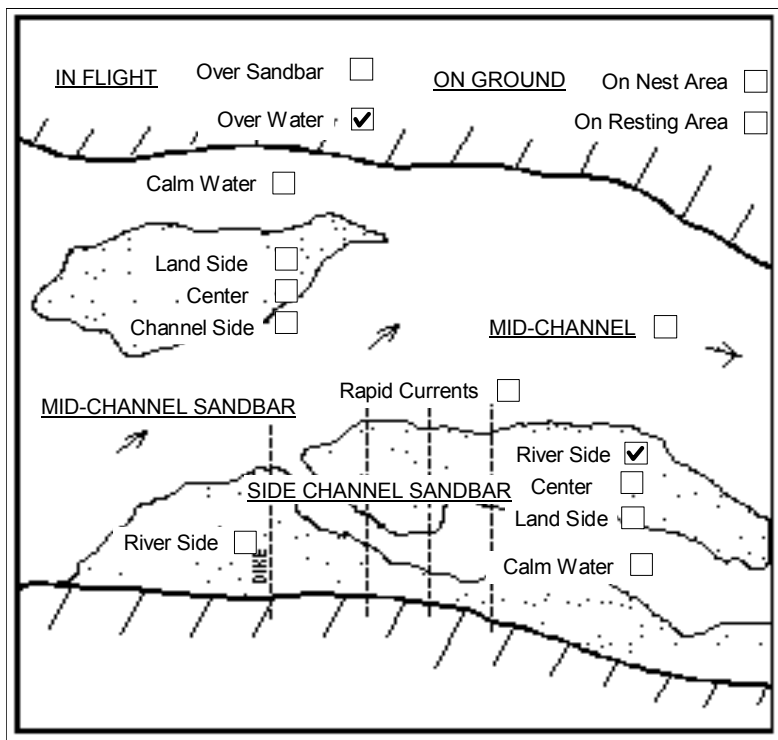
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 83 °F
Rain: No
Wind: 5 mph
% Cloud: 100



OTHER NOTES:

Right Bank. Terns in transit.

MO side

OBSERVERS: Boyd's, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 9:53 RIVER MILE 826.6

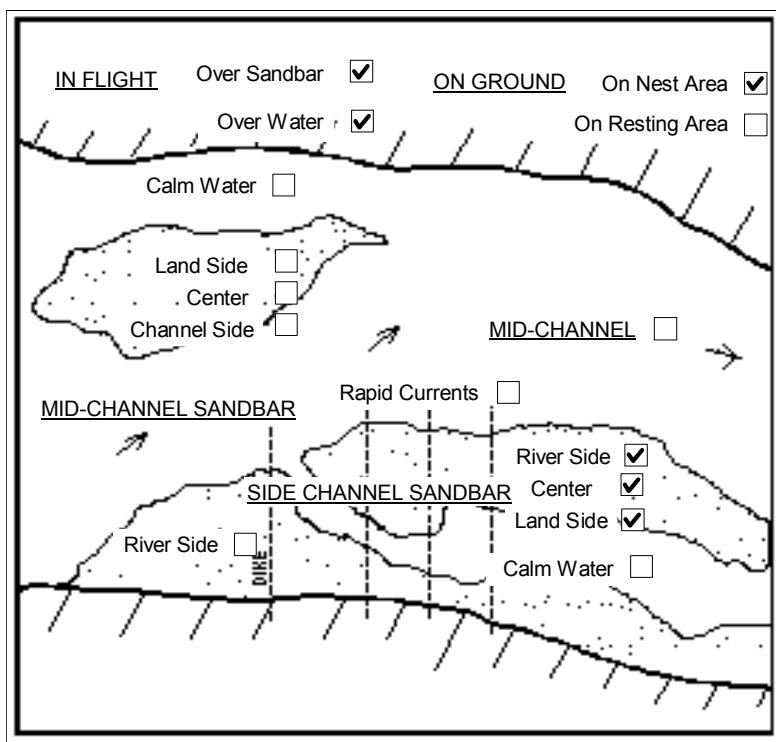
LOCALITY: Dyer TN SITE NAME: Head of Island #21 Dikes
County/Parish State

WHERE SITED: Latitude: 35.97324
Longitude: 89.71639

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 53
Juveniles: _____
Eggs: _____
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: _____
Distance: _____ Feet

FIELD CONDITION:

Temperature: 83 °F
Rain: No
Wind: 5 mph
% Cloud: 100

OTHER NOTES:

Left Bank. Flush count on unattached, high, mid-size, flat-topped sand bar.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 9:55 RIVER MILE 825.3

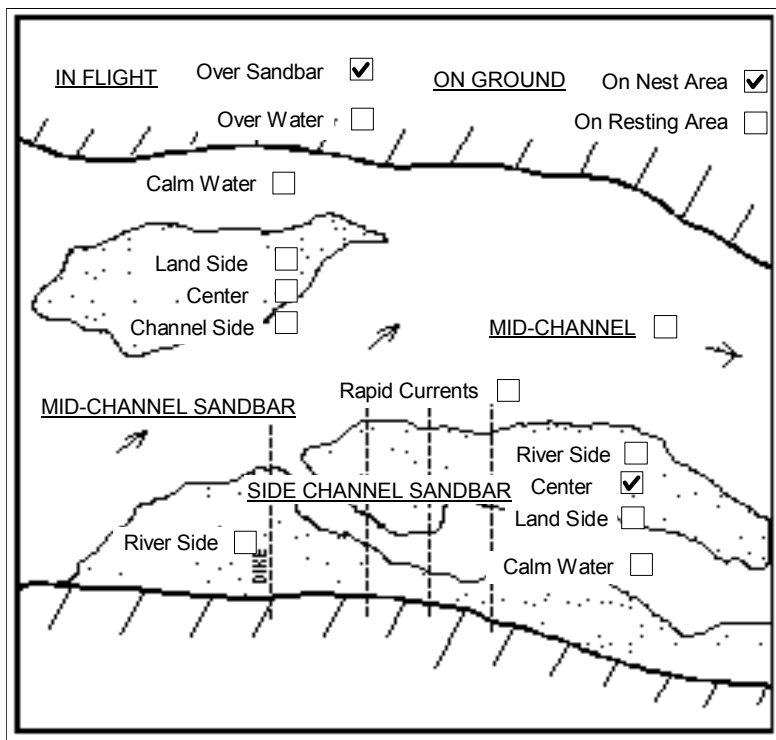
LOCALITY: Dyer TN SITE NAME: Island #21
County/Parish State

WHERE SITED: Latitude: 35.96161
Longitude: 89.70854

Approximate Distance to Water: 60 Feet

NUMBERS SIGHTED:

Adults: 45
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Small Willows
Distance: 500 Feet

FIELD CONDITION:

Temperature: 83 °F
Rain: No
Wind: 5 mph
% Cloud: 100

OTHER NOTES:

Left Bank. Flush count with many active scrapes, unattached, low, gently undulating bar 1/2 mile in length.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 10:15 RIVER MILE 819.4

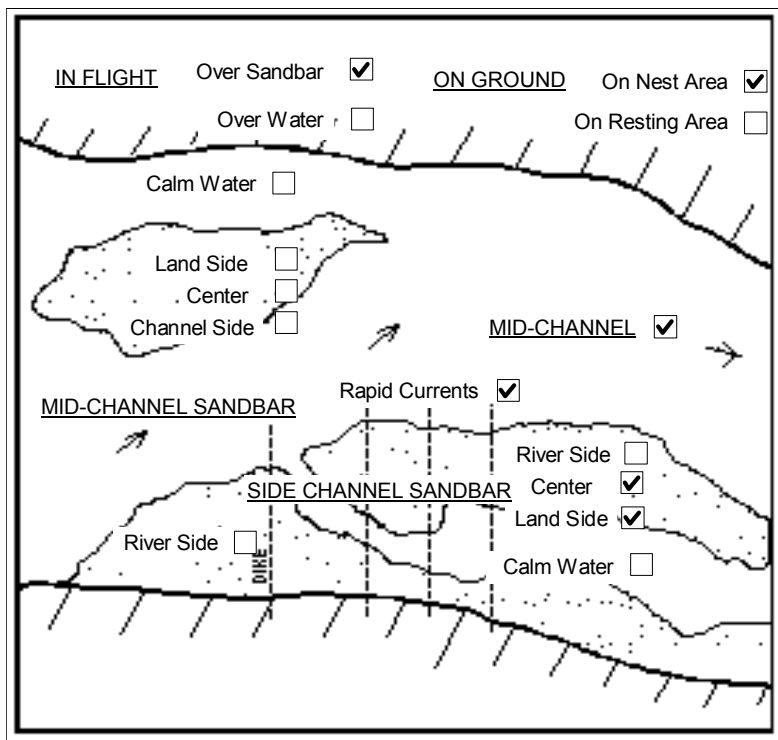
LOCALITY: Mississippi AR SITE NAME: Wrights Point Dikes
County/Parish State

WHERE SITED: Latitude: 35.90662
Longitude: 89.64791

Approximate Distance to Water: 500 Feet

NUMBERS SIGHTED:

Adults: 66
Juveniles:
Eggs: 2
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows/Cottonwoods
Distance: 1000 Feet

FIELD CONDITION:

Temperature: 86 °F
Rain: No
Wind: 5 mph
% Cloud: 100

OTHER NOTES:

Right Bank. Flush count. Large, mid-elevation (8ft.) flat, gently undulating, bar attached to large island with some water in back chute. Canine, human, and deer tracks abundant.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 10:51 RIVER MILE 812

LOCALITY: Lauderdale TN SITE NAME: Below Tamm Bend Dikes
County/Parish State

WHERE SITED: Latitude: 35.89874
Longitude: 89.75754

Approximate Distance to Water: 500 Feet

NUMBERS SIGHTED:

Adults: 40

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☒

Debris: ☐

VEGETATION:

Type: Willows

Distance: 100 Feet

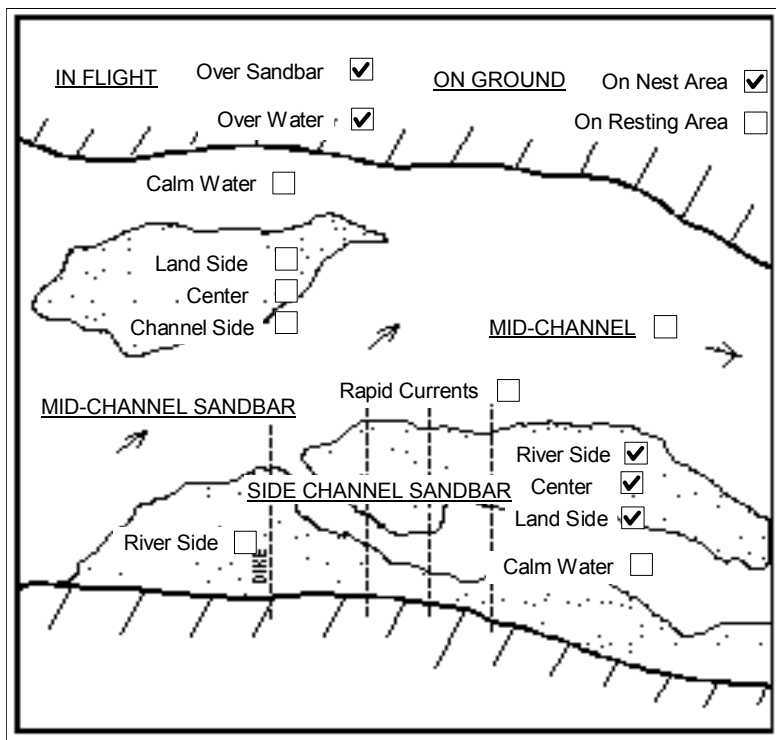
FIELD CONDITION:

Temperature: 88 °F

Rain: No

Wind: 5 mph

% Cloud: 90



OTHER NOTES:

Left Bank. Perimeter count. Low, flat, attached, sand bar with courting behavior and 2 terns sitting on scrapes. Coyote tracks within colony along with 2 Great Blue Herons, but no recent signs of predation.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 11:04 RIVER MILE 807.4

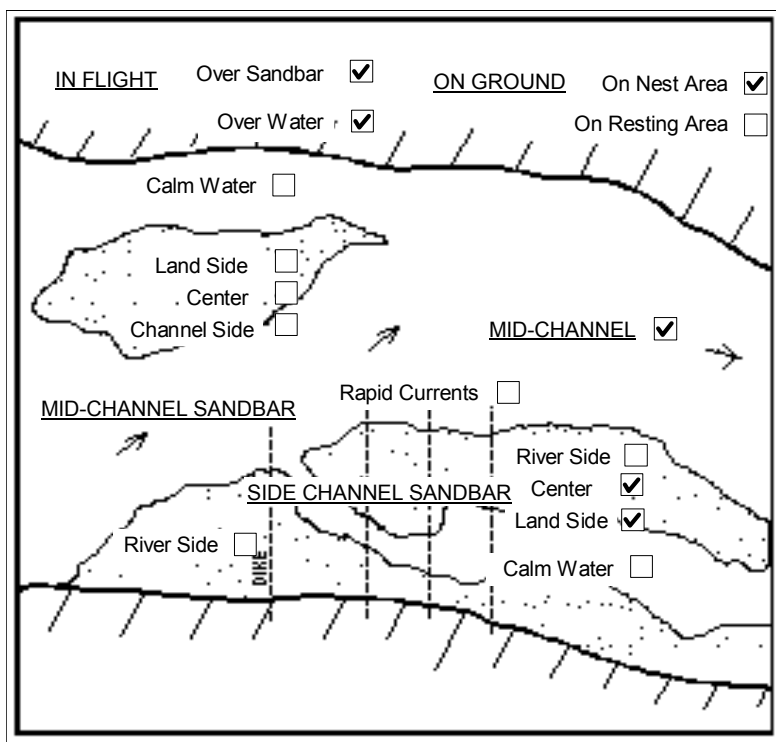
LOCALITY: Lauderdale TN SITE NAME: Nebraska Point Dikes
County/Parish State

WHERE SITED: Latitude: 35.85873
Longitude: 89.75853

Approximate Distance to Water: 600 Feet

NUMBERS SIGHTED:

Adults: 353
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 5 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Two combined flush count on unattached, mid-elevation (5ft.) bar of gently undulating, smooth sand over 3 miles in length. Terns carrying fish, breasting and nests located along wrack lines. Day camper residue with human, Great Blue Heron and one Armadillo seen traveling along the waterline.

TN side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 11:25 RIVER MILE 803.0

LOCALITY: Lauderdale TN SITE NAME: Bend of Island 25
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 6

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

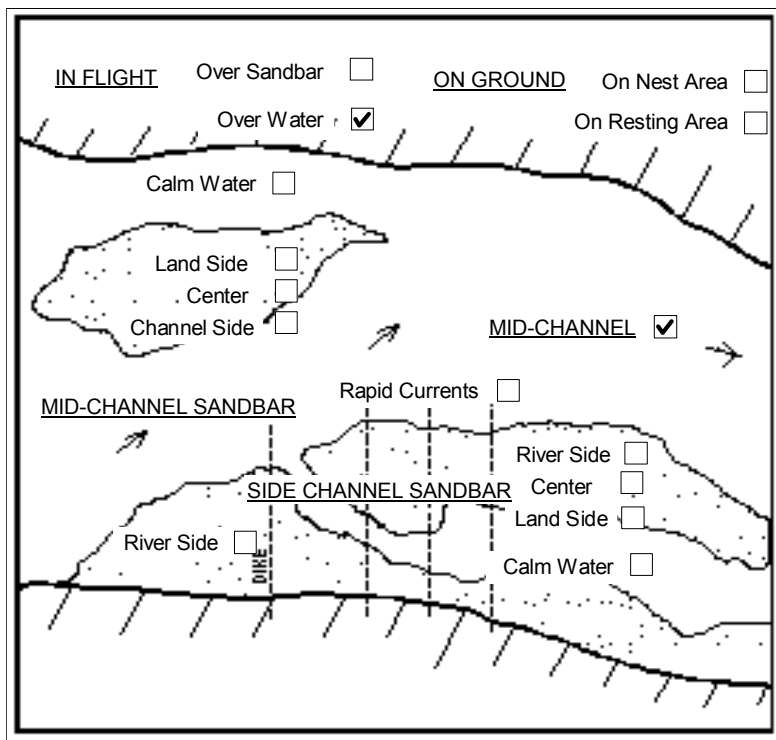
FIELD CONDITION:

Temperature: 90 °F

Rain: No

Wind: 5 mph

% Cloud: 90



OTHER NOTES:

Right Bank. Six terns in transit mid-channel.

TN side

OBSERVERS: Boyd, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 11:46 RIVER MILE 794.2

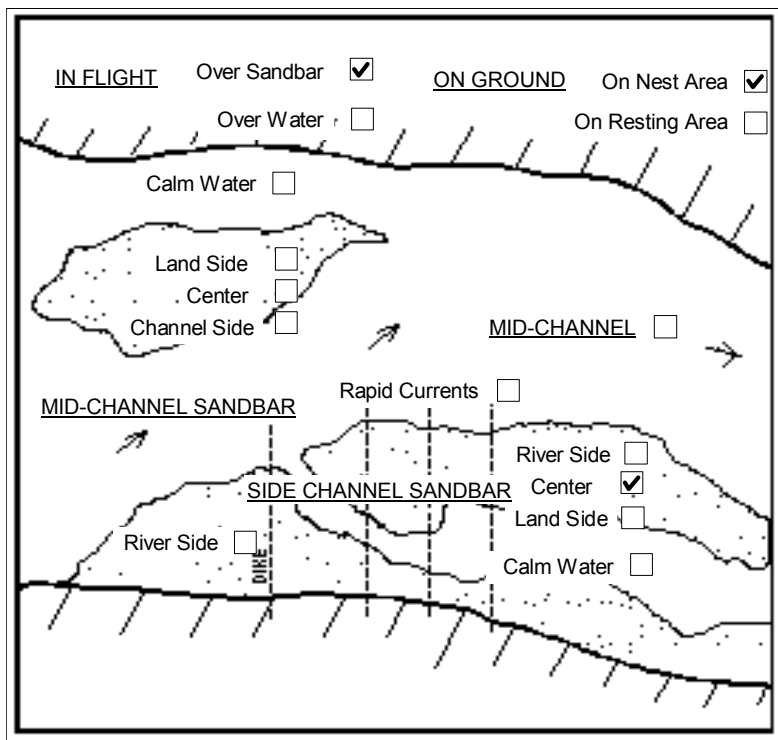
LOCALITY: Lauderdale TN SITE NAME: Ashport Gold Dust Dikes
County/Parish State

WHERE SITED: Latitude: 35.74818
Longitude: 89.82543

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 40
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 90 °F
Rain: No
Wind: 5 mph
% Cloud: 80

OTHER NOTES:

Right Bank. Drift count along low, flat sand bar with little debris, unattached with human and turtle tracks.
Ten terns sitting on scrapes.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 12:10 RIVER MILE 787

LOCALITY: Lauderdale TN SITE NAME: Keyes Point Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 9
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

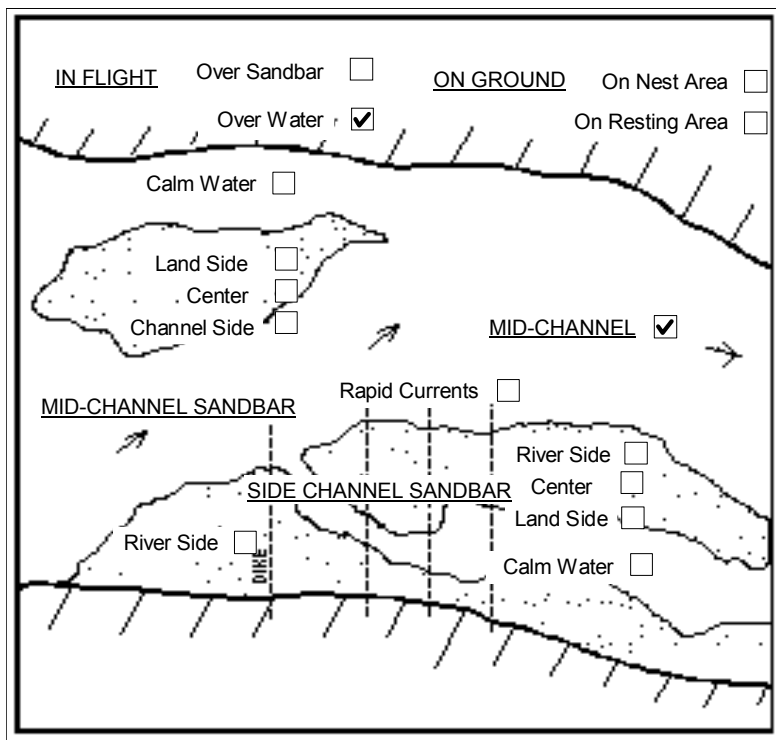
Sand: ☐
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 92 °F
Rain: No
Wind: 5 mph
% Cloud: 90



OTHER NOTES:

Nine terns in flight exhibiting courting behavior.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Caruthersville = 15.1 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 13:50 RIVER MILE 781.2

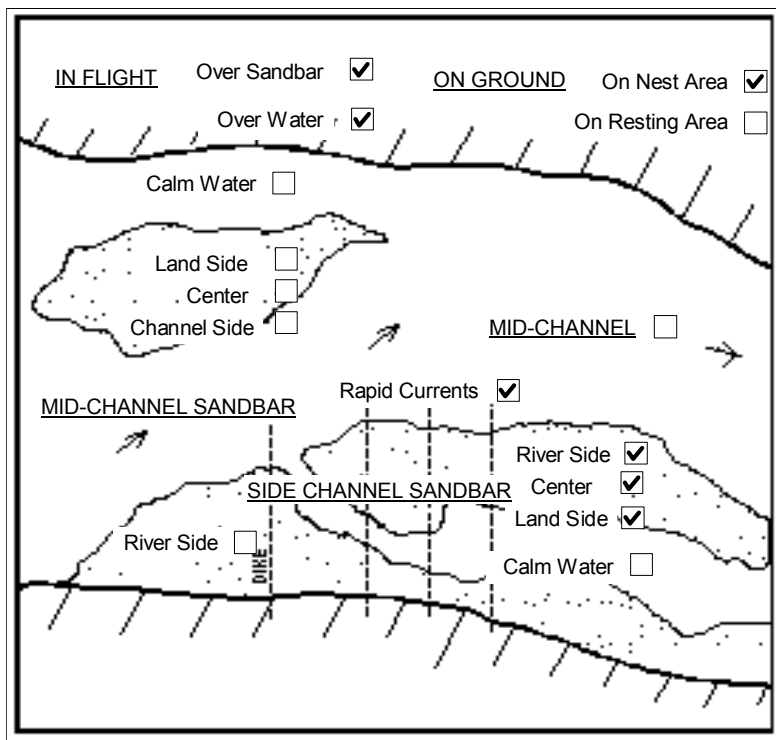
LOCALITY: Lauderdale TN SITE NAME: Below Plum Point Dikes
County/Parish State

WHERE SITED: Latitude: 35.65164
Longitude: 89.89279

Approximate Distance to Water: 60 Feet

NUMBERS SIGHTED:

Adults: 160
Juveniles:
Eggs: 1
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 92 °F
Rain: No
Wind: 5 mph
% Cloud: 90

OTHER NOTES:

Left Bank. High (15 ft.), flat, unattached sand bar with turtle tracks and dead banded water snake. One nest with one egg observed.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 9.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 14:19 RIVER MILE 775.3

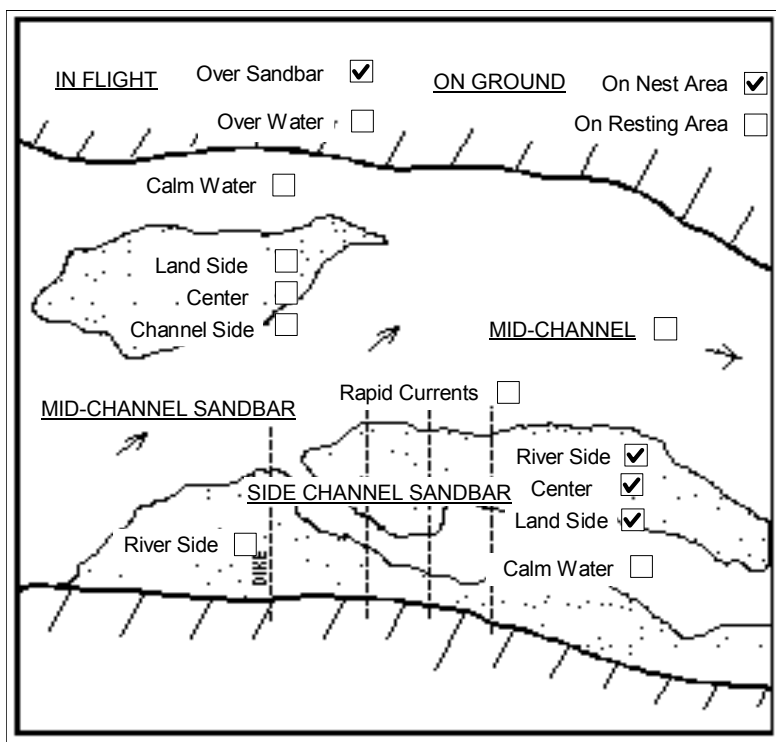
LOCALITY: Lauderdale TN SITE NAME: Sunrise Towhead Chute
County/Parish State

WHERE SITED: Latitude: 35.57951
Longitude: 89.90346

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 23
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 93 °F
Rain: No
Wind: 5 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Perimeter count along unattached, low, slightly undulating, sand bar with patches of fine gravel. Five terns observed sitting on scapes.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 9.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 14:30 RIVER MILE 771.0

LOCALITY: Tipton TN SITE NAME: Randolph Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 9

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

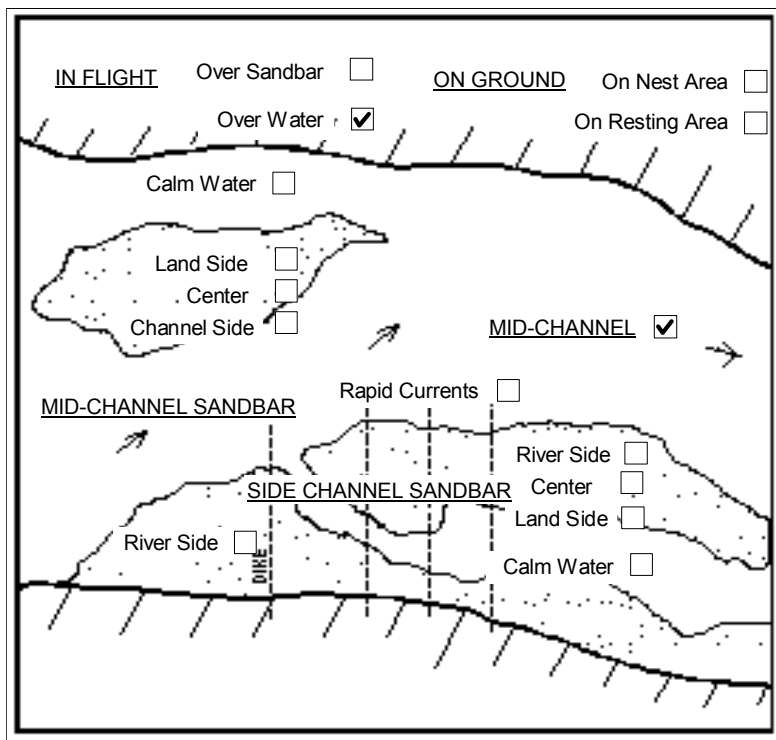
FIELD CONDITION:

Temperature: 95 °F

Rain: No

Wind: 5 mph

% Cloud: 95



OTHER NOTES:

Mid-channel. Birds in transit both sides of river and chute behind Randolph Dikes.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 9.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 14:50 RIVER MILE 766.2

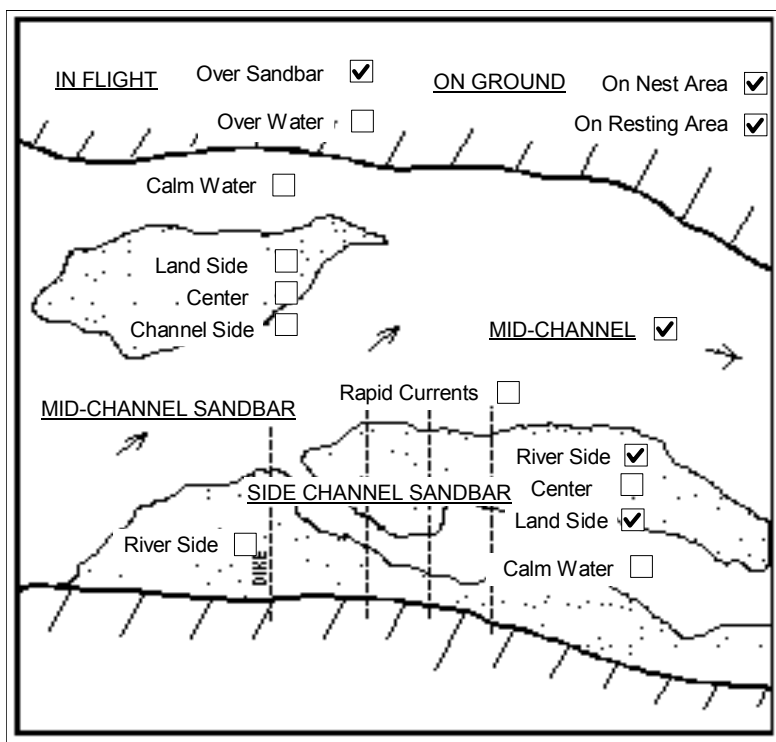
LOCALITY: Tipton TN SITE NAME: Below Richardson Landing Dikes
County/Parish State

WHERE SITED: Latitude: 35.52419
Longitude: 89.98331

Approximate Distance to Water: 350 Feet

NUMBERS SIGHTED:

Adults: 81
Juveniles:
Eggs: 2
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 95 °F
Rain: No
Wind: 5 mph
% Cloud: 92

OTHER NOTES:

Left Bank. Flush count on low, very undulating sandbar, unattached with some gravel on land side of bar.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 9.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 15:20 RIVER MILE 760.0

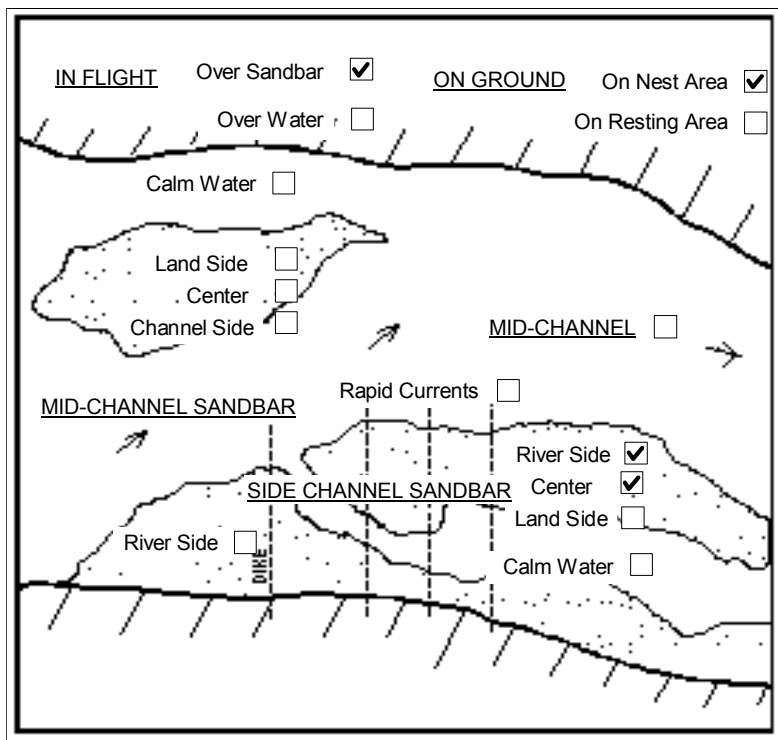
LOCALITY: Mississippi TN SITE NAME: Cedar Point
County/Parish State

WHERE SITED: Latitude: 35.45578
Longitude: 89.99867

Approximate Distance to Water: 300 Feet

NUMBERS SIGHTED:

Adults: 46
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type: Willows
Distance: 1000 Feet

FIELD CONDITION:

Temperature: 99 °F
Rain: No
Wind: 5 mph
% Cloud: 65

OTHER NOTES:

Right Bank. Both perimeter count and flush count yield similar numbers on mid-height sand bar. Four terns sitting on scrapes along with one Forster's Tern.

AR side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 9.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 16:00 RIVER MILE 754.5

LOCALITY: Shelby TN SITE NAME: Densford Bar
County/Parish State

WHERE SITED: Latitude: 35.39468
Longitude: 90.06695

Approximate Distance to Water: 400 Feet

NUMBERS SIGHTED:

Adults: 82
Juveniles:
Eggs: 1
Chicks: No

SUBSTRATE:

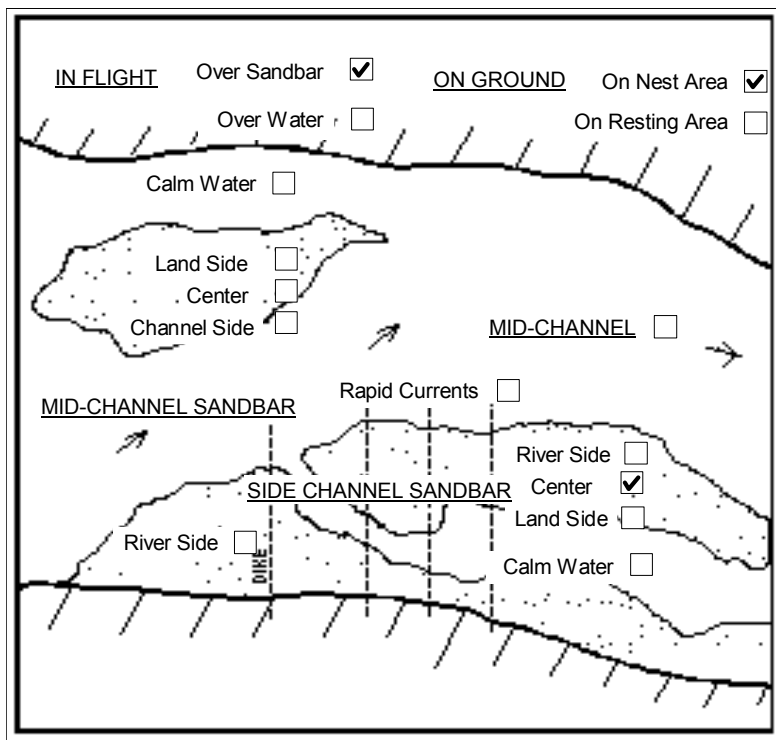
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows/Cottonwoods
Distance: 1000 Feet

FIELD CONDITION:

Temperature: 94 °F
Rain: No
Wind: 5 mph
% Cloud: 65



OTHER NOTES:

Left Bank. Flush count of low to medium-elevation, flat, unattached sand bar. Mobbing of observers, evidence of recent human activity and boating.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 9.2 F
(Gage Location) (Elevation)

FIELD SIGHTING
DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 16:34 RIVER MILE 743.2

LOCALITY: Shelby TN SITE NAME: Above Loosahatchie Dikes
County/Parish State

WHERE SITED: Latitude: 35.24930
Longitude: 90.09153

Approximate Distance to Water: 75 Feet

NUMBERS SIGHTED:

Adults: 9

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

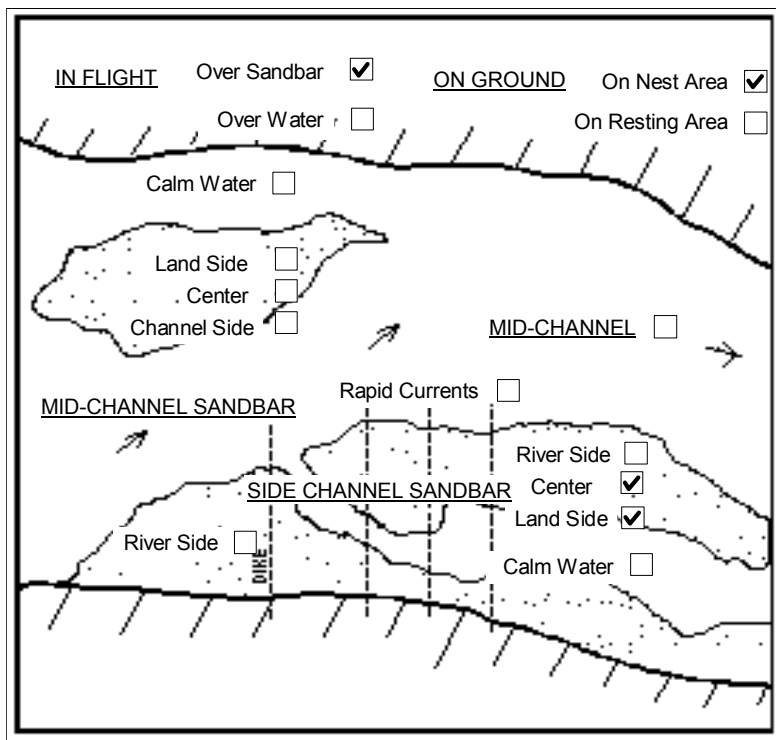
FIELD CONDITION:

Temperature: 91 °F

Rain: No

Wind: 5 mph

% Cloud: 60



OTHER NOTES:

Left Bank. Perimeter count along low, small, flat, unattached sand bar. Six terns resting at waterline, 3 on scrapes. One Bald Eagle in immediate vicinity.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 9.2 F
(Gage Location) (Elevation)

FIELD SIGHTING
DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/12/2009 TIME OF DAY: 16:40 RIVER MILE 740.5

LOCALITY: Crittenden AR SITE NAME: Sycamore Chute Dikes
County/Parish State

WHERE SITED: Latitude: 35.20764
Longitude: 90.07227

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 70

Juveniles: _____

Eggs: _____

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☒

Debris: ☐

VEGETATION:

Type: Cottonwoods/Willows

Distance: 1000 Feet

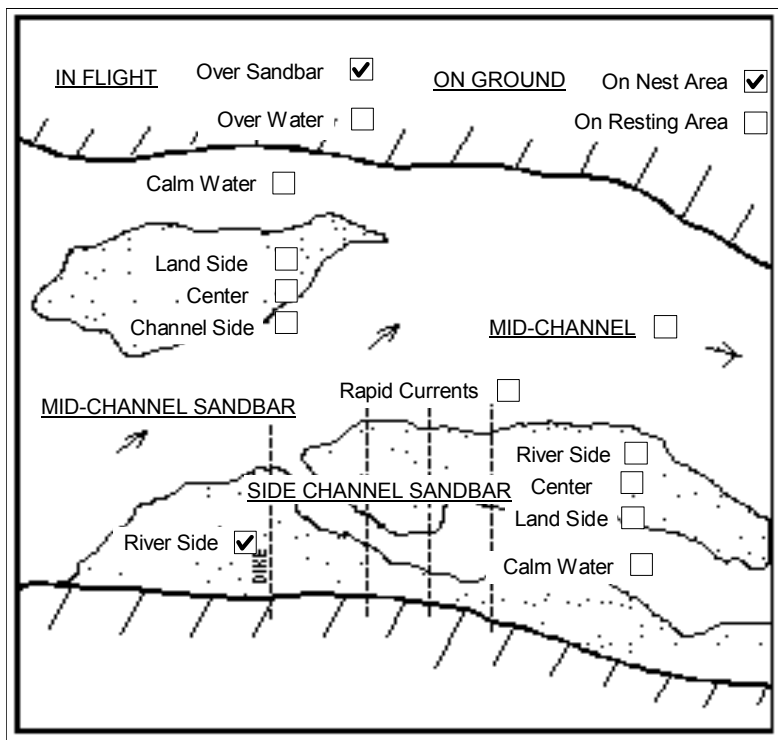
FIELD CONDITION:

Temperature: 91 °F

Rain: No

Wind: 5 mph

% Cloud: 60



OTHER NOTES:

Right Bank. Flush count on attached, low, gently undulating bar of mostly sand with some fine gravel, 800 x 1200 ft. with many scrapes. Fox tracks and signs of human activity. Colony appears to just becoming established.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 9.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/13/2009 TIME OF DAY: 8:45 RIVER MILE 733.0

LOCALITY: Crittenden AR SITE NAME: Engineer Bar Dikes
County/Parish State

WHERE SITED: Latitude: 35.12364
Longitude: 90.10428

Approximate Distance to Water: 150 Feet

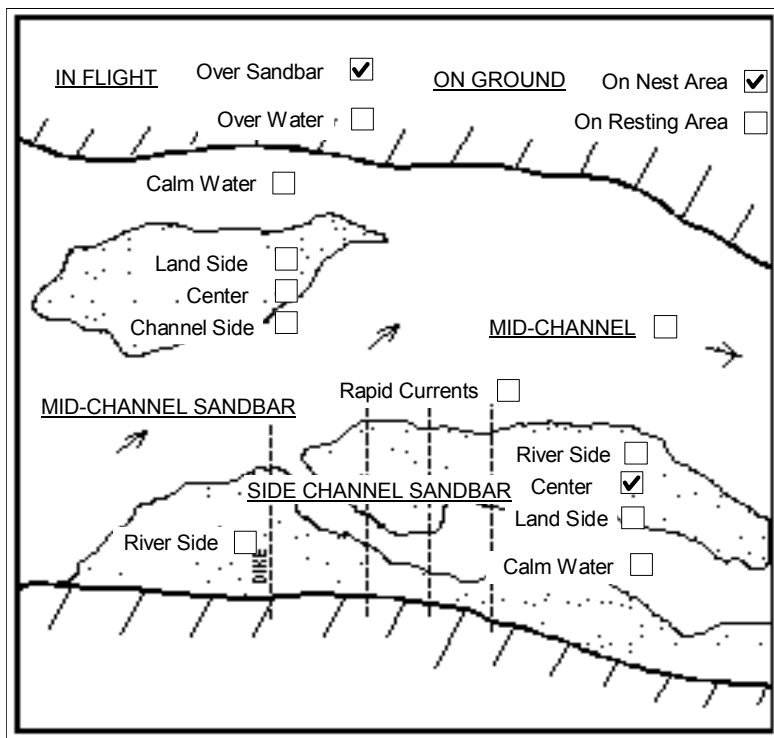
NUMBERS SIGHTED:

Adults: 23

Juveniles:

Eggs:

Chicks: No



SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type: Willows

Distance: 800 Feet

FIELD CONDITION:

Temperature: 84 °F

Rain: No

Wind: 10 mph

% Cloud: 100

OTHER NOTES:

Right Bank. Flush count on low, flat to gently undulating, attached sand bar. Six active scrapes and courting behavior. Canine tracks and 5 Canada Geese.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 7.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/13/2009 TIME OF DAY: 9:11 RIVER MILE 729.5

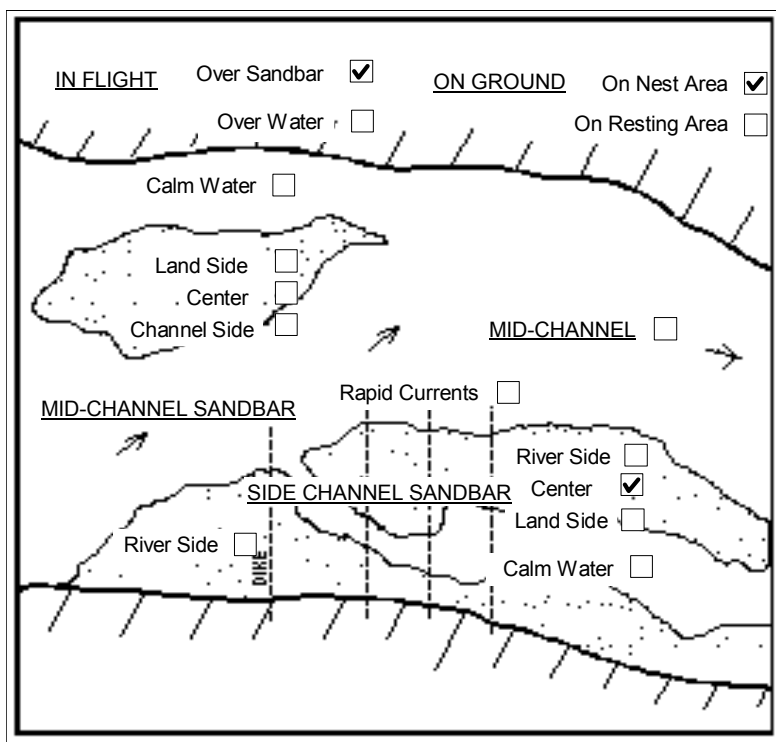
LOCALITY: Shelby TN SITE NAME: Vice Presidents Island #46
County/Parish State

WHERE SITED: Latitude: 35.12428
Longitude: 90.15978

Approximate Distance to Water: 70 Feet

NUMBERS SIGHTED:

Adults: 66
Juveniles:
Eggs: 4(2), 1(1)
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 83 °F
Rain: No
Wind: 10 mph
% Cloud: 100

OTHER NOTES:

Left Bank. Flush count. Low, unattached, clean, point sand bar with 10% gravel in patches. Twelve
Canada Geese present.

TN side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 7.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 8:00 RIVER MILE 725.0

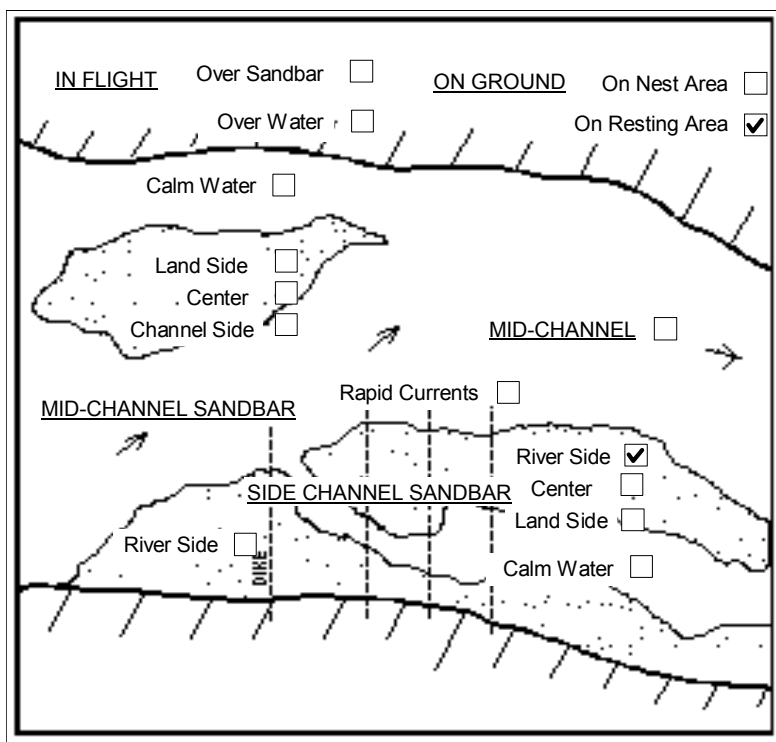
LOCALITY: Crittenden AR SITE NAME: Dismal Point Dikes
County/Parish State

WHERE SITED: Latitude: 35.0691
Longitude: 90.1838

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 4
Juveniles: _____
Eggs: _____
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type: _____
Distance: _____ Feet

FIELD CONDITION:

Temperature: 83 °F
Rain: No
Wind: 10 mph
% Cloud: 60

OTHER NOTES:

Right Bank. Low, attached bar, resting only. Immature Bald Eagle also present.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 7.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 8:25 RIVER MILE 716.5

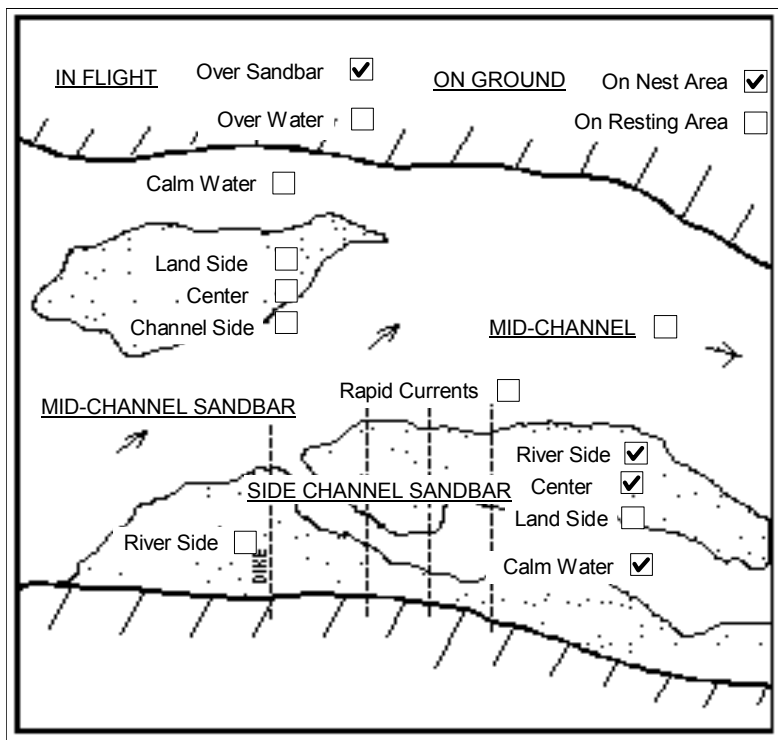
LOCALITY: Desoto MS SITE NAME: Cow Island Bend
County/Parish State

WHERE SITED: Latitude: 35.0122
Longitude: 90.28744

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 229
Juveniles:
Eggs: 4(1), 3(2)
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: No
Wind: 5 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Flush counts at upper and lower end of unattached, 2mile long, low (3ft.) undulating, sand bar with colony concentrated on upper and lower ends. Many fresh scrapes and courting behavior indicative of newly formed colony.

MS side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 7.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 8:45 RIVER MILE 710.5

LOCALITY: Crittenden AR SITE NAME: Cat Island Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 2

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

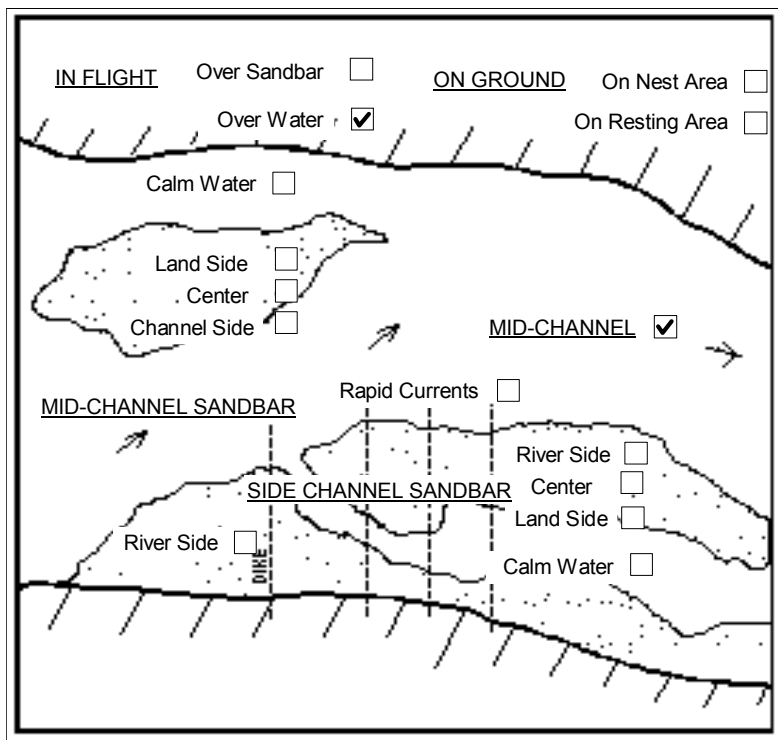
FIELD CONDITION:

Temperature: 92 °F

Rain: No

Wind: 5 mph

% Cloud: 90



OTHER NOTES:

Two feeding along dike field.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 7.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 9:20 RIVER MILE 706.5

LOCALITY: Crittenden AR SITE NAME: Seypell Dikes Upper
County/Parish State

WHERE SITED: Latitude: 34.89416
Longitude: 90.26083

Approximate Distance to Water: 80 Feet

NUMBERS SIGHTED:

Adults: 400
Juveniles:
Eggs: 2
Chicks: No

SUBSTRATE:

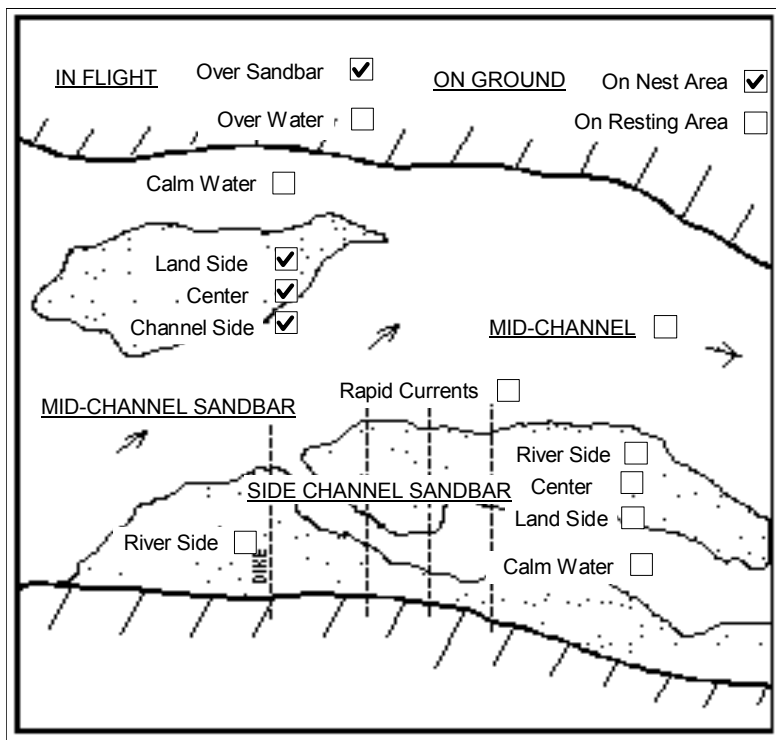
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 85 °F
Rain: No
Wind: 5 mph
% Cloud: 95



OTHER NOTES:

Right Bank. Flush count on high (12ft.), unattached, clean sand bar (1100 x 2200ft.). Over 55 terns sitting on scrapes.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 7.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 9:30 RIVER MILE 705.2

LOCALITY: Crittenden AR SITE NAME: Seypell Dikes Lower
County/Parish State

WHERE SITED: Latitude: 34.88873
Longitude: 90.28032

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 110
Juveniles:
Eggs: 2
Chicks: No

SUBSTRATE:

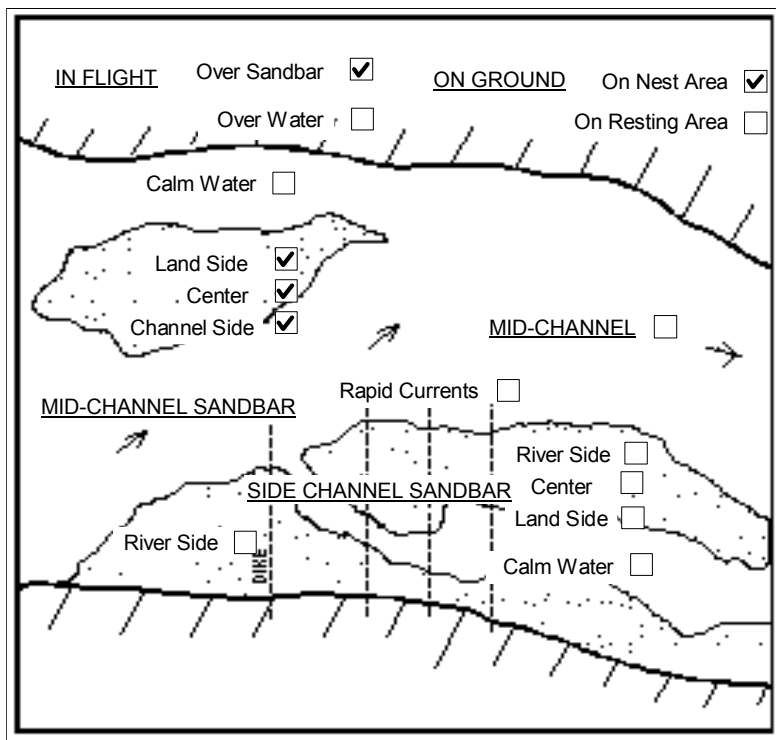
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 85 °F
Rain: No
Wind: 5 mph
% Cloud: 98



OTHER NOTES:

Right Bank. Flush count on low (4ft.), flat, unattached bar of clean sand. Many scrapes and courting behavior with some nests in wracklines on downstream point of bar. Turtle tracks and 5 Canada Geese on bar.

Ar side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 7.2 F
(Gage Location) (Elevation)

FLY ☐ BOAT ☒

A - II - 41

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 10:10 RIVER MILE 700.0

LOCALITY: Crittenden AR SITE NAME: Basket Bar diikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 15

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

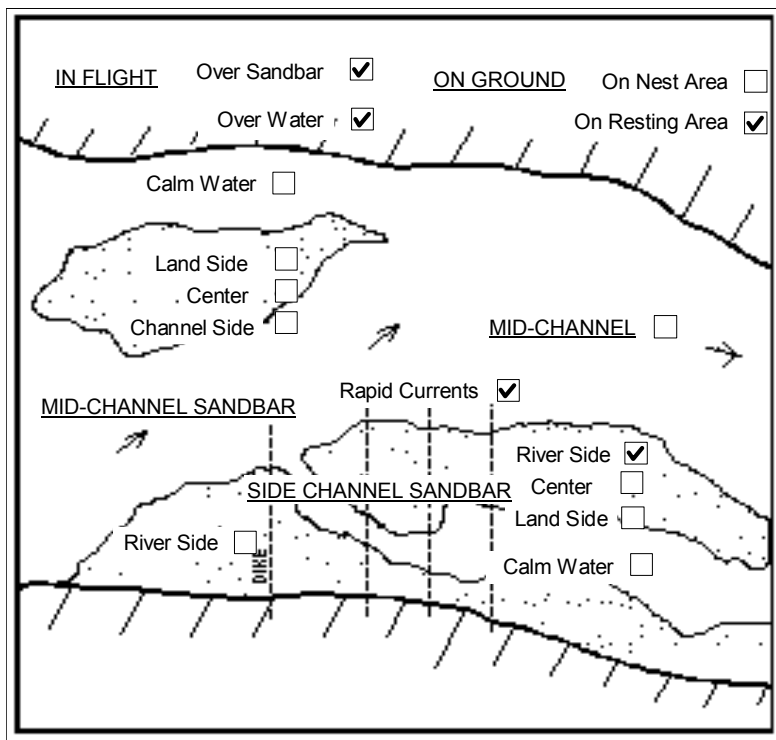
FIELD CONDITION:

Temperature: 86 °F

Rain: No

Wind: 5 mph

% Cloud: 100



OTHER NOTES:

Right Bank. Attached bar with six resting at waterline and 9 feeding along dikes.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Memphis = 7.2 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/5009 TIME OF DAY: 10:30 RIVER MILE 692.3

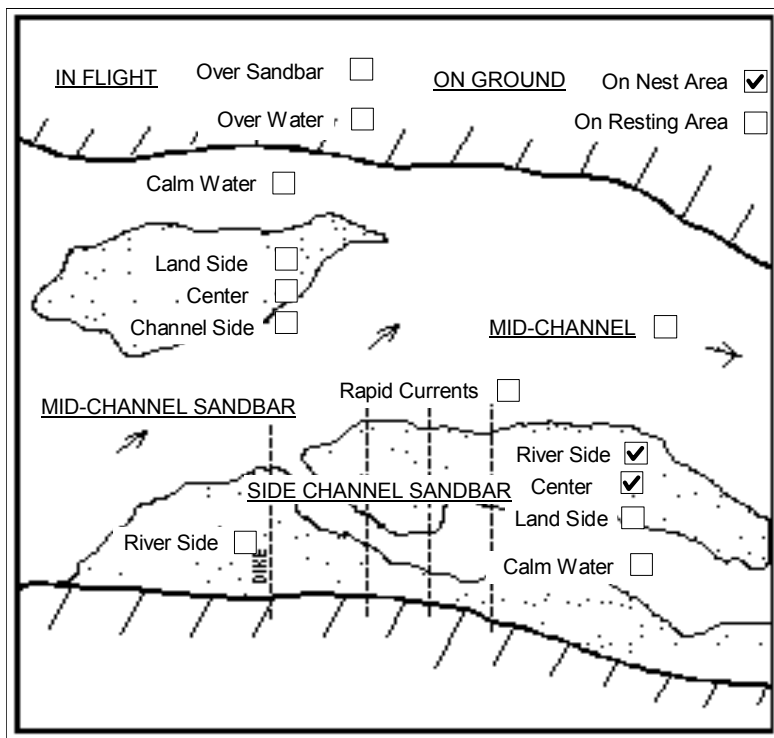
LOCALITY: Tunica MS SITE NAME: Rabbit Island
County/Parish State

WHERE SITED: Latitude: 34.81047
Longitude: 90.46430

Approximate Distance to Water: 300 Feet

NUMBERS SIGHTED:

Adults: 50
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 86 °F
Rain: No
Wind: 5 mph
% Cloud: 100

OTHER NOTES:

Left Bank. Perimeter count. Large, high (3-10ft.) 1.5 mile long by 1/4 mile wide sand bar, moderately undulating and no debris. Five terns sitting on scrapes inland. Fifty White Pelicans and 200 Canada Geese 2 miles downriver from colony.

MS side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 11:05 RIVER MILE 686.5

LOCALITY: Lee AR SITE NAME: Mhoon Bend
County/Parish State

WHERE SITED: Latitude: 34.73556
Longitude: 90.45821

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 32
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

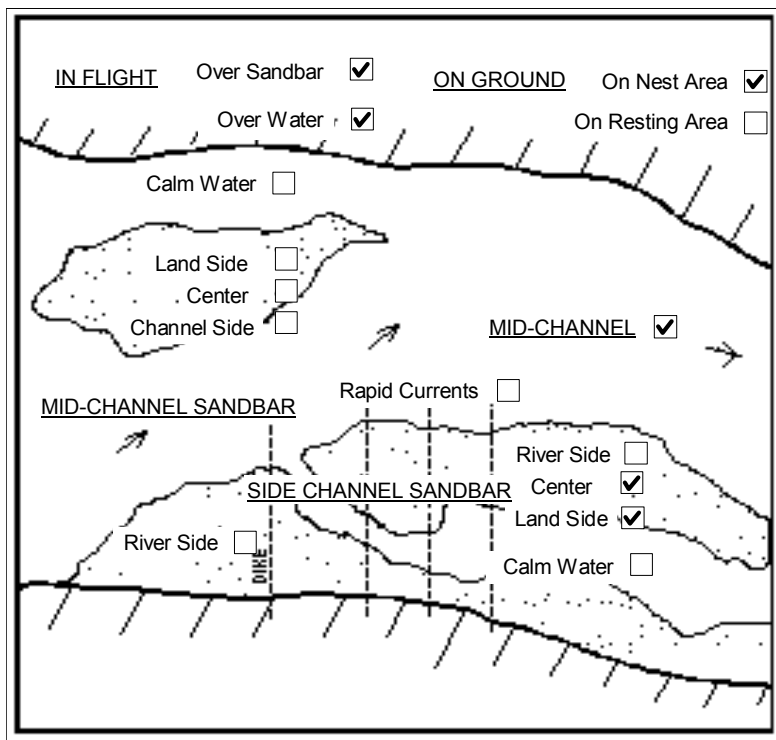
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 1000 Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 5 mph
% Cloud: 100



OTHER NOTES:

Right Bank. Flush count yields no nests or birds sitting on scrapes. However courting behavior indicates future colony site. Sand bar unattached and 5ft. in elevation. Fifteen Mississippi Kites and 1 Ring-billed Gull also present.

AR side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 11:30 RIVER MILE 680.3

LOCALITY: Tunica MS SITE NAME: Bordeaux Point Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 5
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

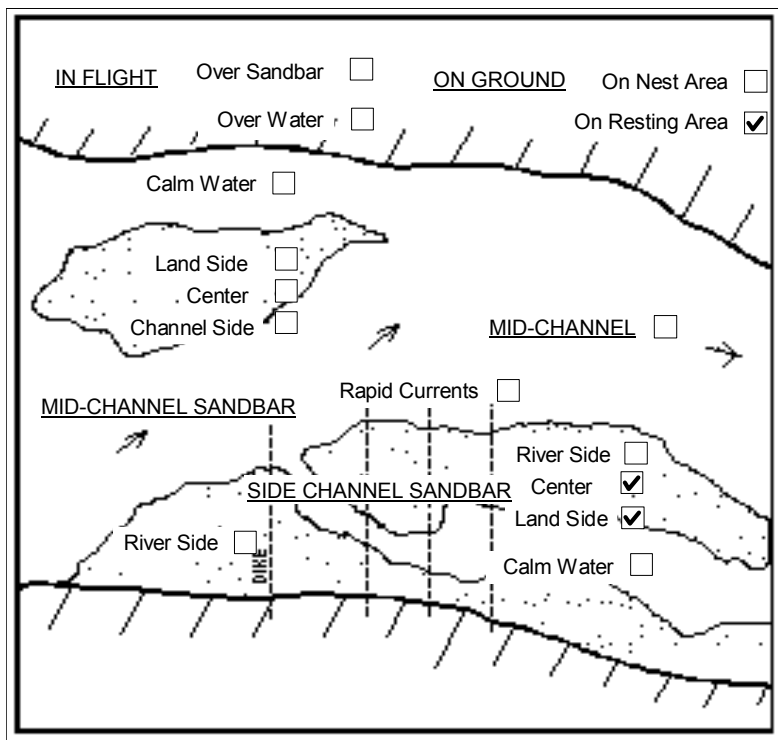
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 1000 Feet

FIELD CONDITION:

Temperature: 87 °F
Rain: No
Wind: 5 mph
% Cloud: 98



OTHER NOTES:

Left Bank. Perimeter count of 5 birds resting at waterline. Sand bar 5 ft. and gently sloping and attached with small willows on upstream end. Resting bar only.

MS side

OBSERVERS: Boyd, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 12:09 RIVER MILE 676

LOCALITY: Lee AR SITE NAME: Below Walnut Bend Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 40
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

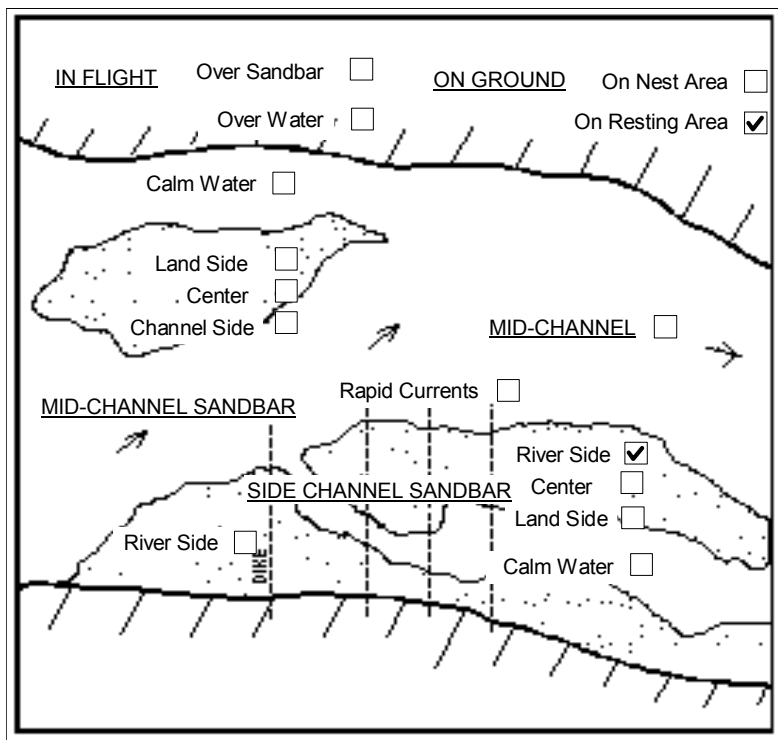
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 88 °F
Rain: No
Wind: 5 mph
% Cloud: 95



OTHER NOTES:

Right Bank. Barely exposed sand bar 100 x 300 ft. Terns in flight and 26 resting at the waterline. No signs of breeding or reproductive behavior.

AR side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 12:09 RIVER MILE 672.1

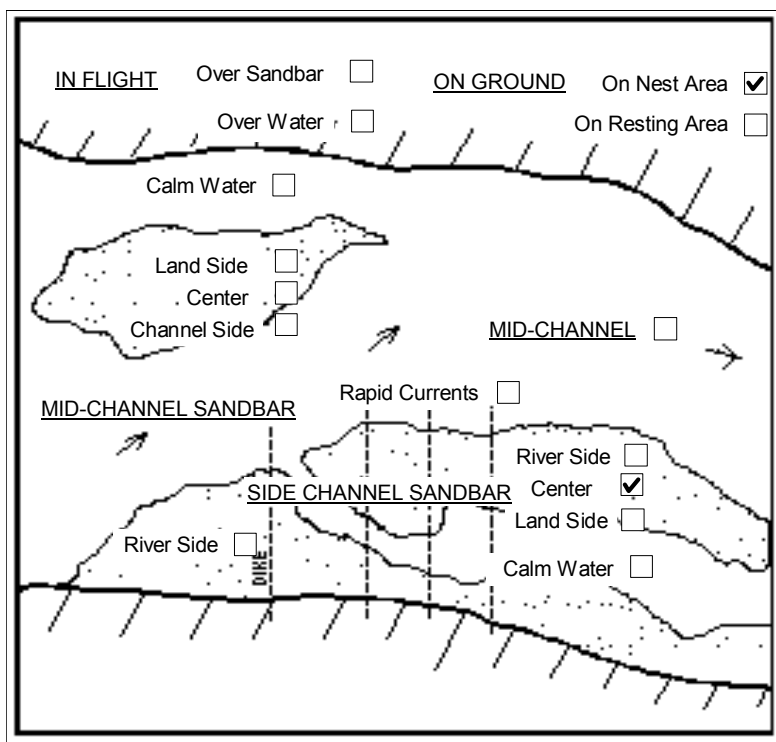
LOCALITY: Tunica MS SITE NAME: St. Francis Bend
County/Parish State

WHERE SITED: Latitude: 34.62107
Longitude: 90.50377

Approximate Distance to Water: 450 Feet

NUMBERS SIGHTED:

Adults: 150
Juveniles:
Eggs: 1-3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 5 mph
% Cloud: 98

OTHER NOTES:

Left Bank. Perimeter count and flush count on very long (3 mi. x 1 mi.) unattached, sand bar (3-10 ft. elevation). Most terns along the waterline but 4 sitting on scrapes inland. Evidence of human activity.

MS side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 13:13 RIVER MILE 667.8

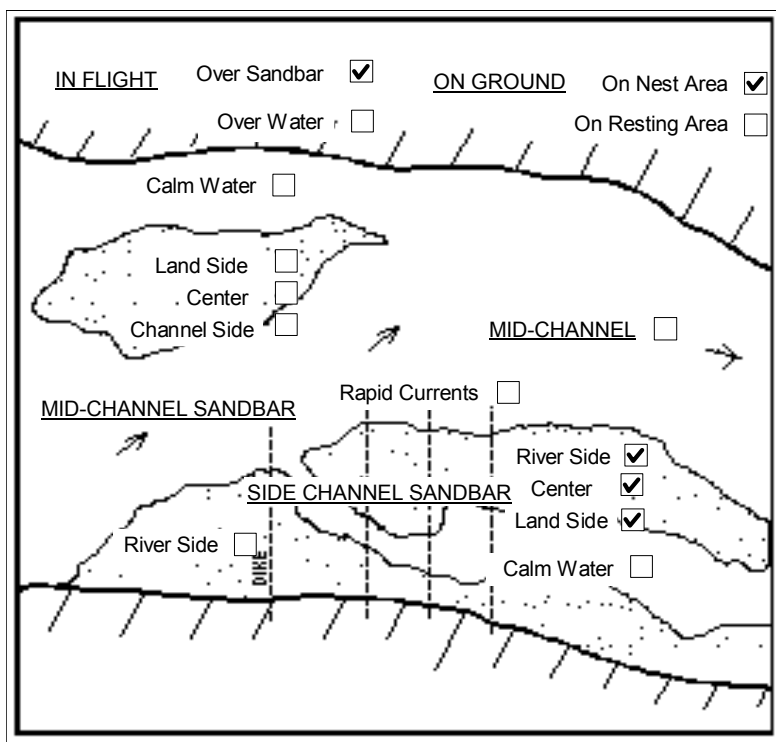
LOCALITY: Phillips AR SITE NAME: Prairie Point Dikes
County/Parish State

WHERE SITED: Latitude: 34.56587
Longitude: 90.55711

Approximate Distance to Water: 1200 Feet

NUMBERS SIGHTED:

Adults: 423
Juveniles:
Eggs: 3
Chicks: Yes



SUBSTRATE:

Sand: checked
Gravel: checked
Debris: unchecked

VEGETATION:

Type: Large willows
Distance: 2500 Feet

FIELD CONDITION:

Temperature: 94 °F
Rain: No
Wind: 5 mph
% Cloud: 94

OTHER NOTES:

Right Bank. Flush count on low, gently undulating, attached, sand bar with large patches of gravel. First chick of the survey noted here ~1 week old. Also signs of predation on eggs with Great Blue Heron tracks and Deer tracks. Relic mussel shells found on bar were Fragile Papershell, Mapleleaf, Yellow Sandshell, and Fat Pocketbook. Fat Pocketbook was freshly dead and over 1,000 ft. from waterline in gravel and 4 ft. in elevation. Also one live Bluefer was found at the waterline. AR side

OBSERVERS: Boyds, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 14:45 RIVER MILE 655.6

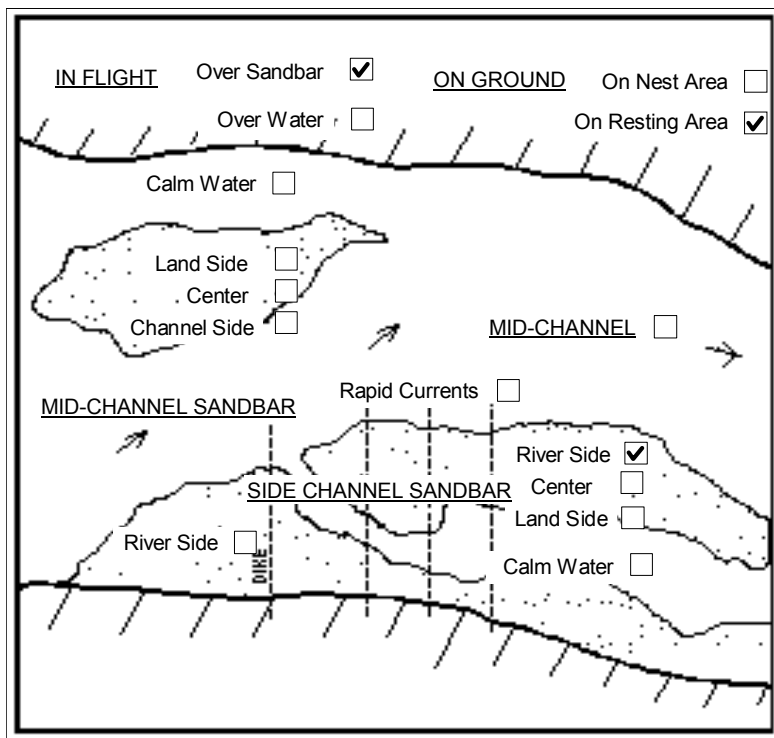
LOCALITY: Phillips AR SITE NAME: Montezuma Towhead Dikes
County/Parish State

WHERE SITED: Latitude: 34.37618
Longitude: 90.65429

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 33
Juveniles: _____
Eggs: _____
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type: _____
Distance: _____ Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 5 mph
% Cloud: 95

OTHER NOTES:

Right Bank. Perimeter count on very low (<2ft.), small (200 x 100ft.) half sand, half gravel bar. Resting bar only.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 14:50 RIVER MILE 651.8

LOCALITY: Coahoma MS SITE NAME: Friars Point Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 31
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

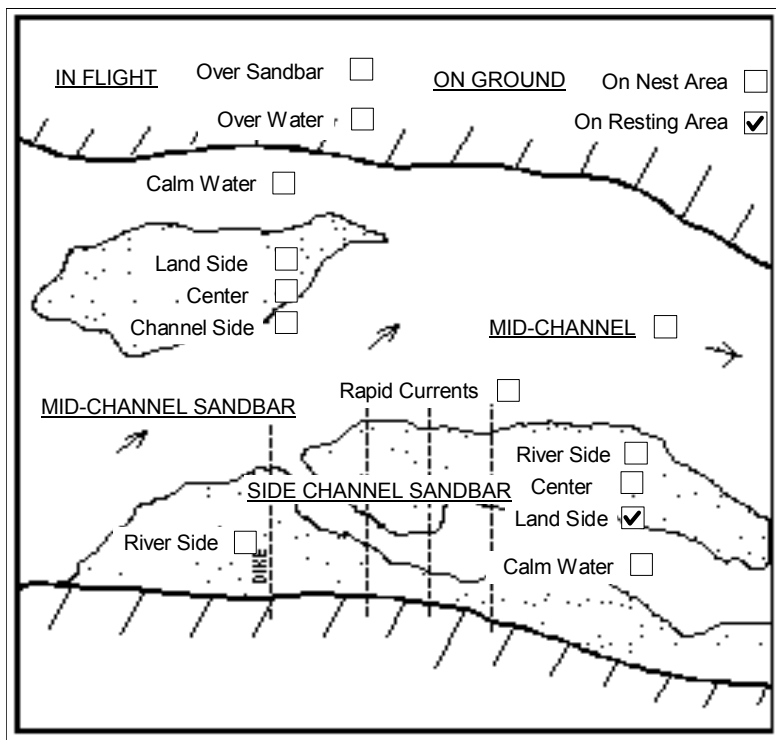
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 5 mph
% Cloud: 95



OTHER NOTES:

Left Bank. Perimeter count on resting bar only.

MS side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FLY ☐ BOAT ☒

A - II - 51

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☐

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/5009 TIME OF DAY: 15:24 RIVER MILE 646.5

LOCALITY: Phillips AR SITE NAME: Kangaroo Point Dikes Lower
County/Parish State

WHERE SITED: Latitude: 34.36644
Longitude: 90.73659

Approximate Distance to Water: 150 Feet

NUMBERS SIGHTED:

Adults: 33

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

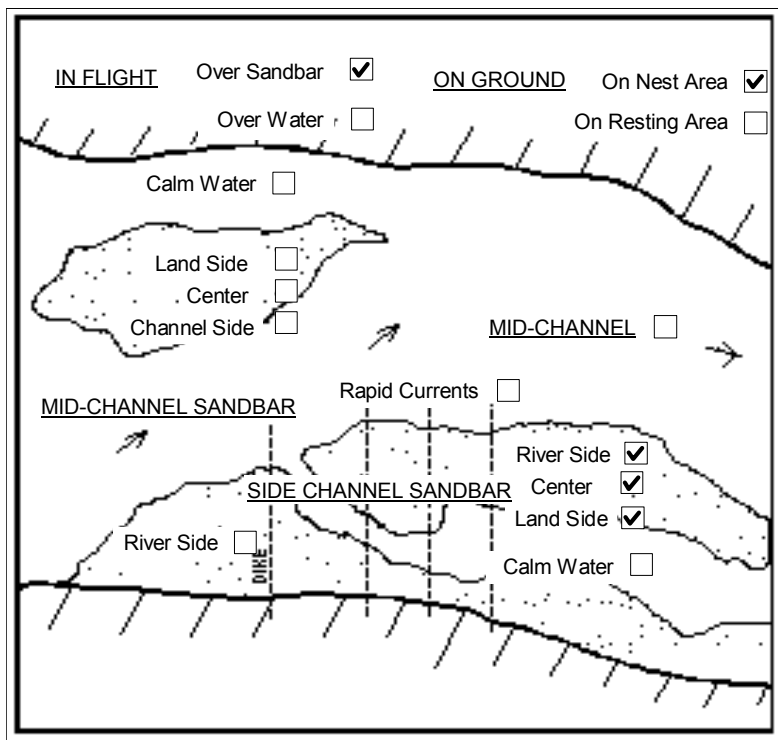
FIELD CONDITION:

Temperature: 91 °F

Rain: No

Wind: 5 mph

% Cloud: 90



OTHER NOTES:

Right Bank. Perimeter count of same bar but downstream, attached, 5ft. Elevation, flat bar of clean sand.
Three sitting on scrapes and others at the waterline.

AR side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/14/2009 TIME OF DAY: 15:40 RIVER MILE 643.4

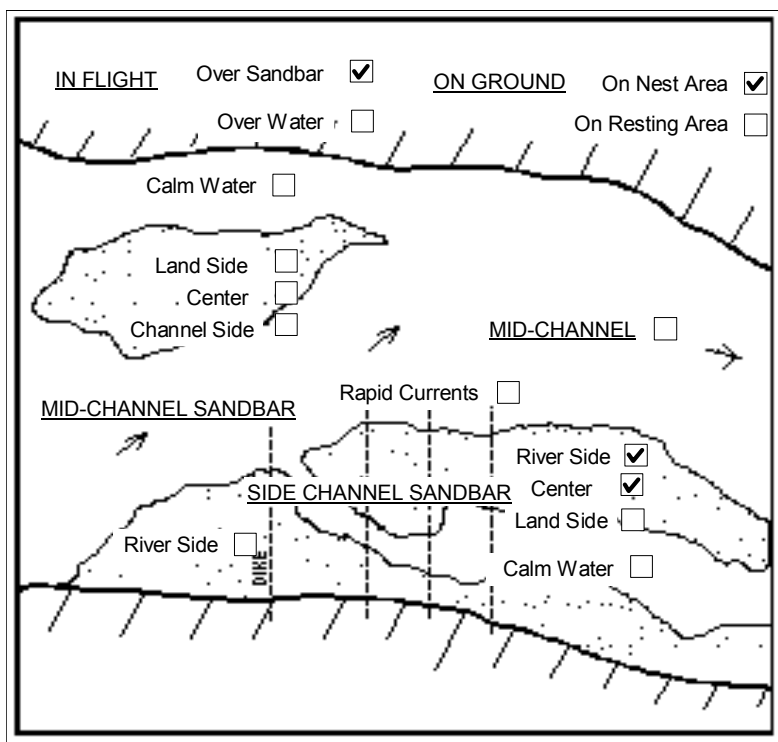
LOCALITY: Coahoma MS SITE NAME: Old Town Bend
County/Parish State

WHERE SITED: Latitude: 34.35226
Longitude: 90.76402

Approximate Distance to Water: 125 Feet

NUMBERS SIGHTED:

Adults: 18
Juveniles:
Eggs: 2
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: No
Wind: 5 mph
% Cloud: 95

OTHER NOTES:

Left Bank. Flush count on attached, 8 ft. elevated bar of clean sand. Canine tracks and Cattle Egrets present.

MS side

OBSERVERS: Boys, Campen, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 14.7 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 9:52 RIVER MILE 640.3

LOCALITY: Phillips AR SITE NAME: Island #62 Dikes Upper
County/Parish State

WHERE SITED: Latitude: 34.30482
Longitude: 90.73929

Approximate Distance to Water: 1000 Feet

NUMBERS SIGHTED:

Adults: 92
Juveniles:
Eggs: 2,3
Chicks: Yes

SUBSTRATE:

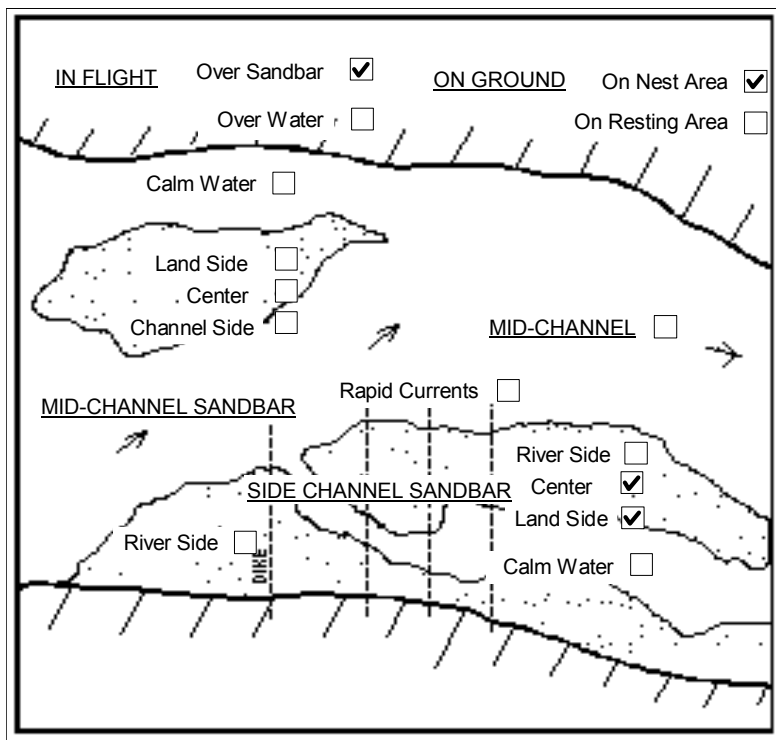
Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type: Willows
Distance: 1000 Feet

FIELD CONDITION:

Temperature: 88 °F
Rain: No
Wind: 5 mph
% Cloud: 10



OTHER NOTES:

Right Bank. Flush count on unattached, clean sand bar undulating with patches of gravel and many scrapes. Bar sloping in elevation up to 10 ft. Many chicks from 4 days to 1 week old. Many canine tracks and heron tracks.

AR side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 10:05 RIVER MILE 637.3

LOCALITY: Phillips AR SITE NAME: Island #62 Dikes Lower
County/Parish State

WHERE SITED: Latitude: 34.27662
Longitude: 90.76811

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 15

Juveniles: _____

Eggs: _____

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☒

Debris: ☐

VEGETATION:

Type: _____

Distance: _____ Feet

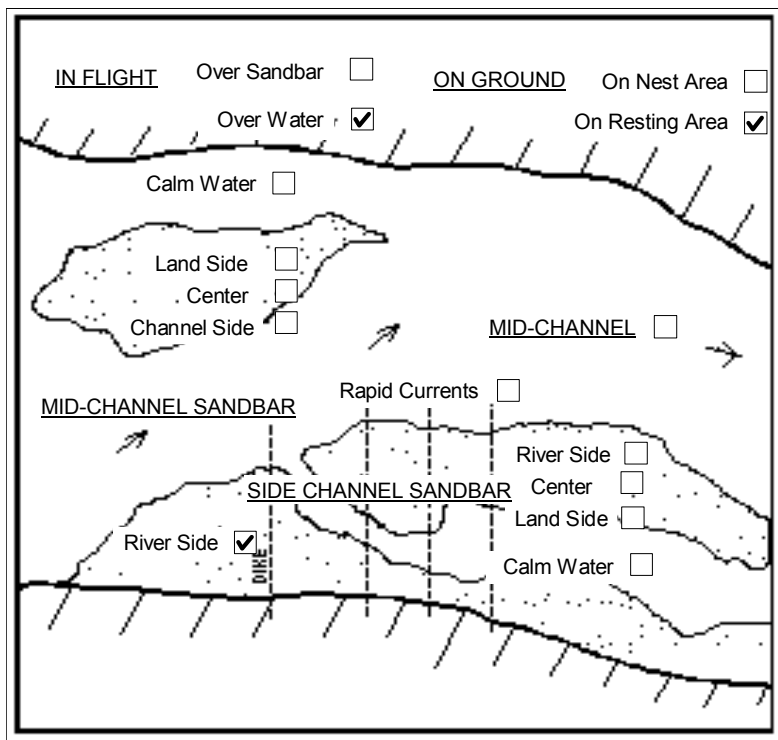
FIELD CONDITION:

Temperature: 89 °F

Rain: No

Wind: 5 mph

% Cloud: 5



OTHER NOTES:

Right Bank. Perimeter count on attached, low (4 ft.), river side bar bordering chute behind Island #63 Bar
Revetment. Resting only.

AR side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 10:36 RIVER MILE 629.5

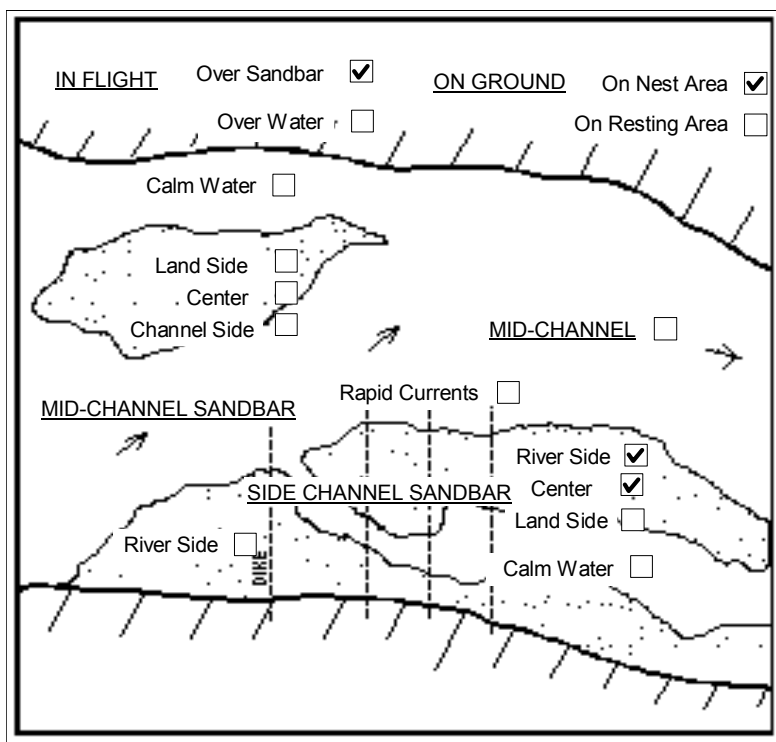
LOCALITY: Phillips AR SITE NAME: Island #64 Dikes
County/Parish State

WHERE SITED: Latitude: 34.21799
Longitude: 90.84954

Approximate Distance to Water: 150 Feet

NUMBERS SIGHTED:

Adults: 70
Juveniles:
Eggs: 2,3
Chicks: Yes



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Cottonwoods
Distance: 2000 Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 5 mph
% Cloud: 5

OTHER NOTES:

Right Bank. Flush count on flat, semi-attached sand bar (6 ft. elevation). Nests in sand and next to small debris, many scrapes with chick tracks. 10 + nests observed and chicks 3 days to 1 1/2 week of age.

AR side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 10:53 RIVER MILE 625.3

LOCALITY: Coahoma MS SITE NAME: Sunflower Cut-Off Upper
County/Parish State

WHERE SITED: Latitude: 34.17692
Longitude: 90.89412

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 47
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

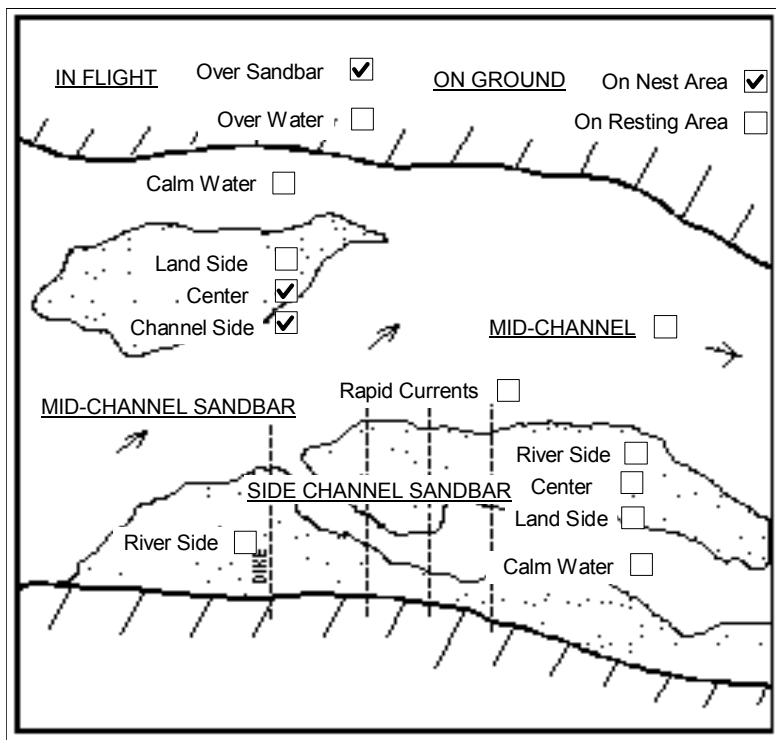
Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 5 mph
% Cloud: 5



OTHER NOTES:

Left Bank. Perimeter count on small, low < 2ft., flat, 2000 x 200ft., mid-channel bar, unattached at entrance to Desoto Lake. Nine nests counted.

MS side

OBSERVERS: Boyds, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 11:00 RIVER MILE 624.7

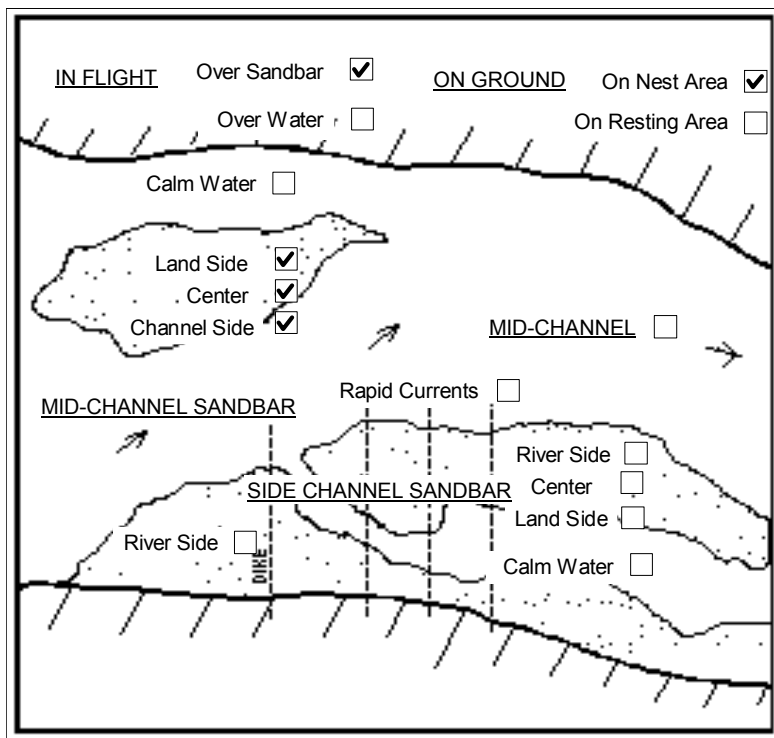
LOCALITY: Coahoma MS SITE NAME: Sunflower Cut-Off Lower
County/Parish State

WHERE SITED: Latitude: 34.16903
Longitude: 90.90265

Approximate Distance to Water: 75 Feet

NUMBERS SIGHTED:

Adults: 83
Juveniles:
Eggs: 1,2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: No
Wind: 5 mph
% Cloud: 5

OTHER NOTES:

Left Bank. Flush count on low (4 ft.), unattached sandbar with no debris. Many birds courting and breasting along the waterline. Nine birds on scrapes.

MS side

OBSERVERS: Boyds, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 11:18 RIVER MILE 623

LOCALITY: Phillips AR SITE NAME: Below Ludlow Dikes
County/Parish State

WHERE SITED: Latitude: 34.16035
Longitude: 90.92811

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 50

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☒

Debris: ☐

VEGETATION:

Type:

Distance: Feet

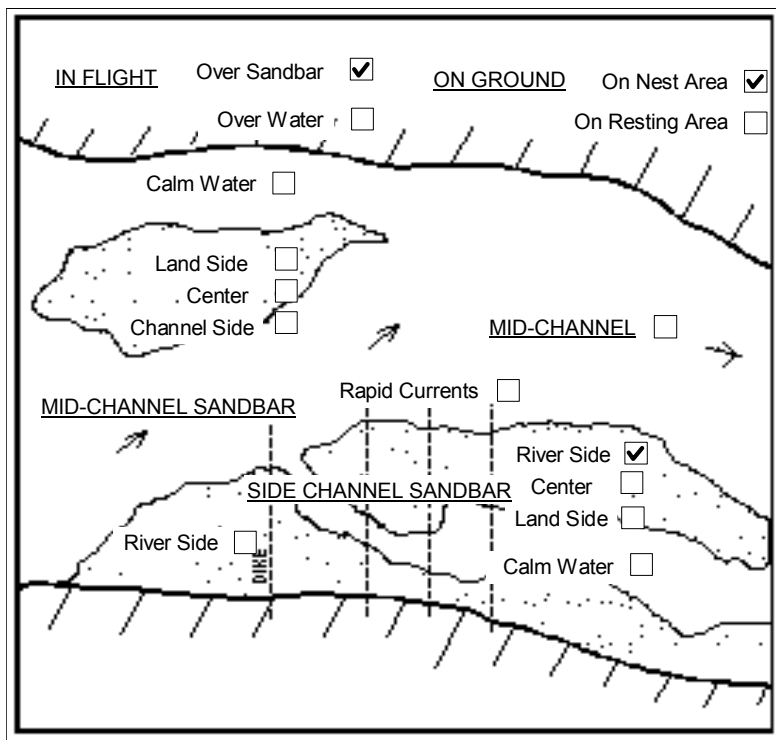
FIELD CONDITION:

Temperature: 94 °F

Rain: No

Wind: 5 mph

% Cloud: 5



OTHER NOTES:

Right Bank. Perimeter count on attached, low (4 ft.), gently sloping bar of mostly gravel. Five terns sitting on scrapes.

AR side

OBSERVERS: Boys, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 11:25 RIVER MILE 620.3

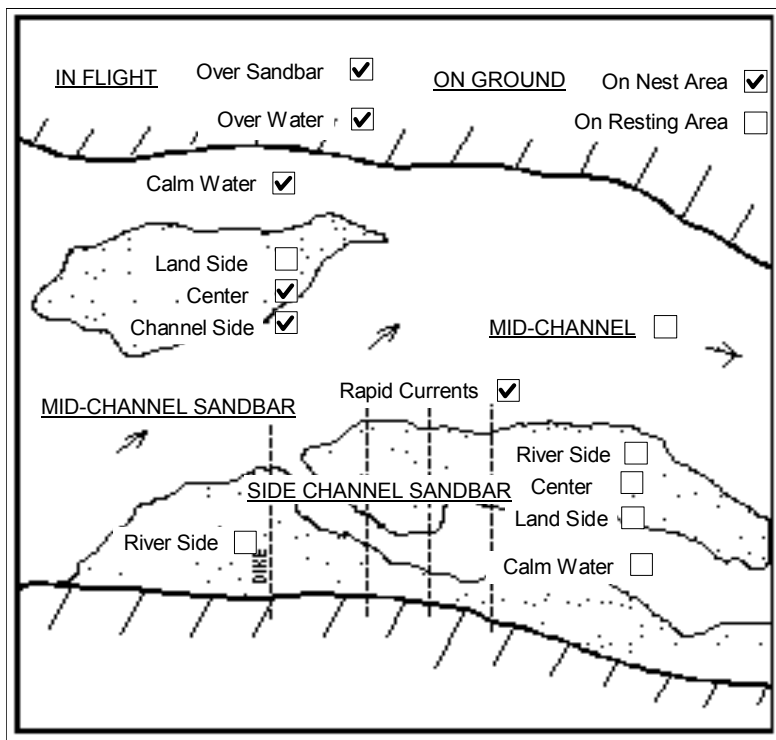
LOCALITY: Coahoma MS SITE NAME: Island #67 Dikes
County/Parish State

WHERE SITED: Latitude: 34.12610
Longitude: 90.5430

Approximate Distance to Water: 300 Feet

NUMBERS SIGHTED:

Adults: 125
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☒

VEGETATION:

Type: Willows/Cottonwoods
Distance: 800 Feet

FIELD CONDITION:

Temperature: 95 °F
Rain: No
Wind: 5 mph
% Cloud: 5

OTHER NOTES:

Left Bank. Perimeter count along long, large, gently sloping, unattached, sand bar with large back chute. Fifteen sitting on scrapes. Thirty-five Great Blue Herons, some being mobbed. Fishing back chute and opposite bank.

MS side

OBSERVERS: Boys, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 12:00 RIVER MILE 612.4

LOCALITY: Desha AR SITE NAME: Below Knowlton Dikes Upper
County/Parish State

WHERE SITED: Latitude: 34.03316
Longitude: 90.89326

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 53
Juveniles:
Eggs: 1
Chicks: No

SUBSTRATE:

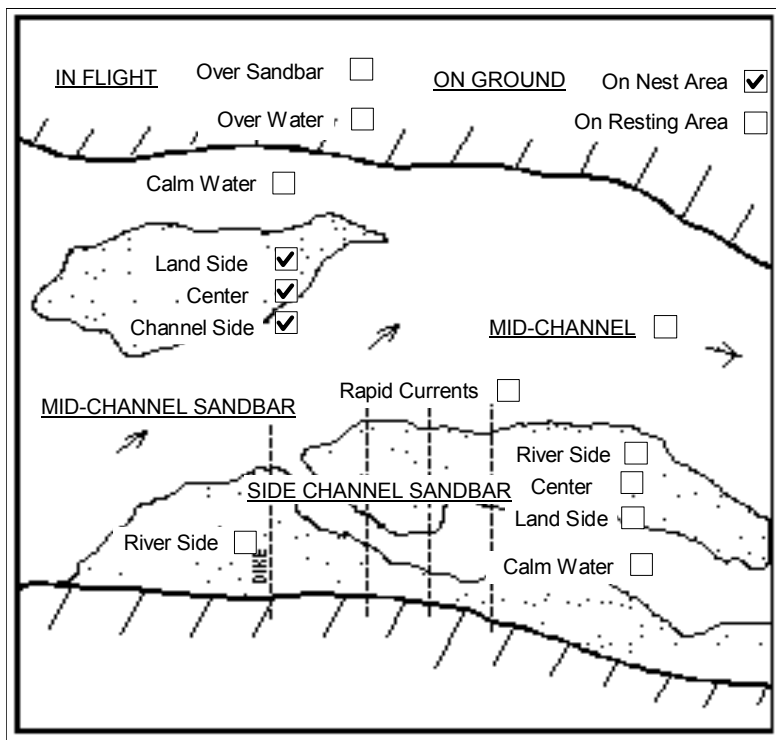
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 94 °F
Rain: No
Wind: 5 mph
% Cloud: 50



OTHER NOTES:

Right Bank. Flush count on medium-sized, unattached, clean, sandbar (6 ft. high). Many observed sitting on scrapes.

AR side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 12:07 RIVER MILE 612.2

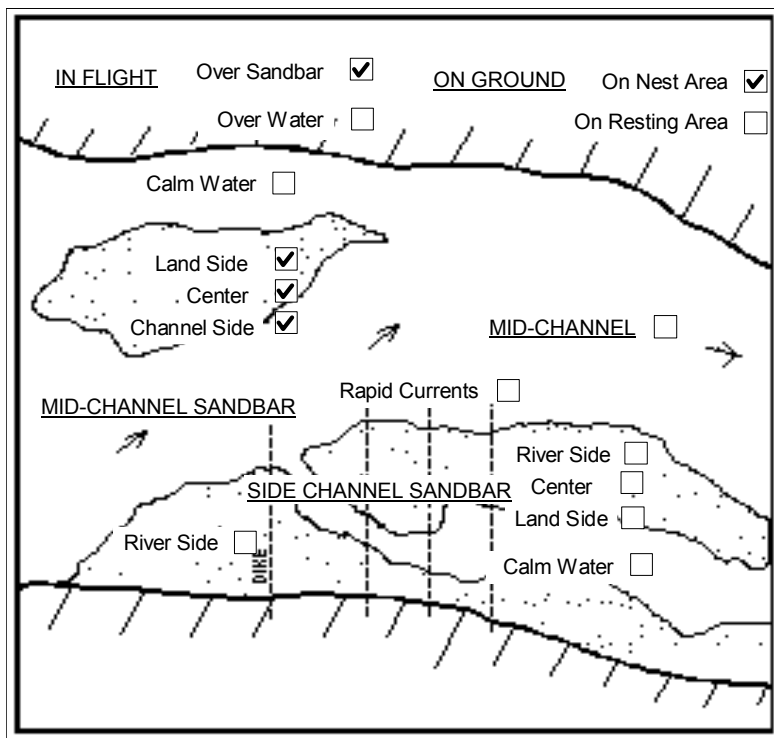
LOCALITY: Desha AR SITE NAME: Below Knowlton Dikes Lower
County/Parish State

WHERE SITED: Latitude: 34.02794
Longitude: 90.90060

Approximate Distance to Water: 60 Feet

NUMBERS SIGHTED:

Adults: 60
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☒

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 94 °F
Rain: No
Wind: 5 mph
% Cloud: 5

OTHER NOTES:

Right Bank. Flush count. High (10 ft.) sand bar, flat and unattached.

AR side

OBSERVERS: Boys, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 12:20 RIVER MILE 608

LOCALITY: Bolivar MS SITE NAME: Island #70 Dikes
County/Parish State

WHERE SITED: Latitude: 34.02286
Longitude: 90.96428

Approximate Distance to Water: 60 Feet

NUMBERS SIGHTED:

Adults: 51
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

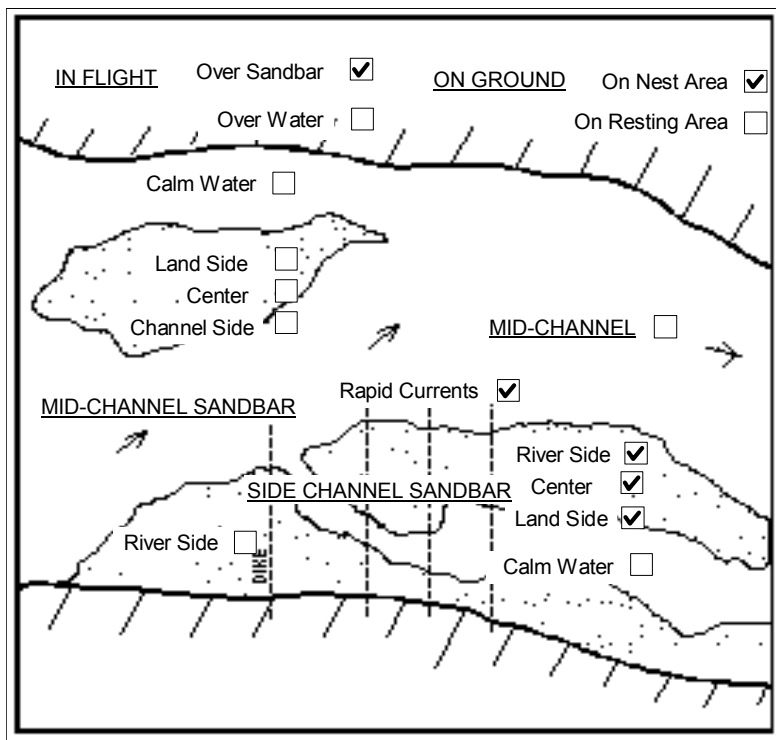
Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 92 °F
Rain: No
Wind: 5 mph
% Cloud: 5



OTHER NOTES:

Left Bank. Perimeter count on low (~3 ft.) small sand bar with some gravel patches, unattached and much courting behavior. Three terns sitting on scrapes.

MS side

OBSERVERS: Boyds, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 12:42 RIVER MILE 602.7

LOCALITY: Bolivar MS SITE NAME: Henrico Dikes
County/Parish State

WHERE SITED: Latitude: 33.9898
Longitude: 91.0500

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 50
Juveniles: _____
Eggs: _____
Chicks: No

SUBSTRATE:

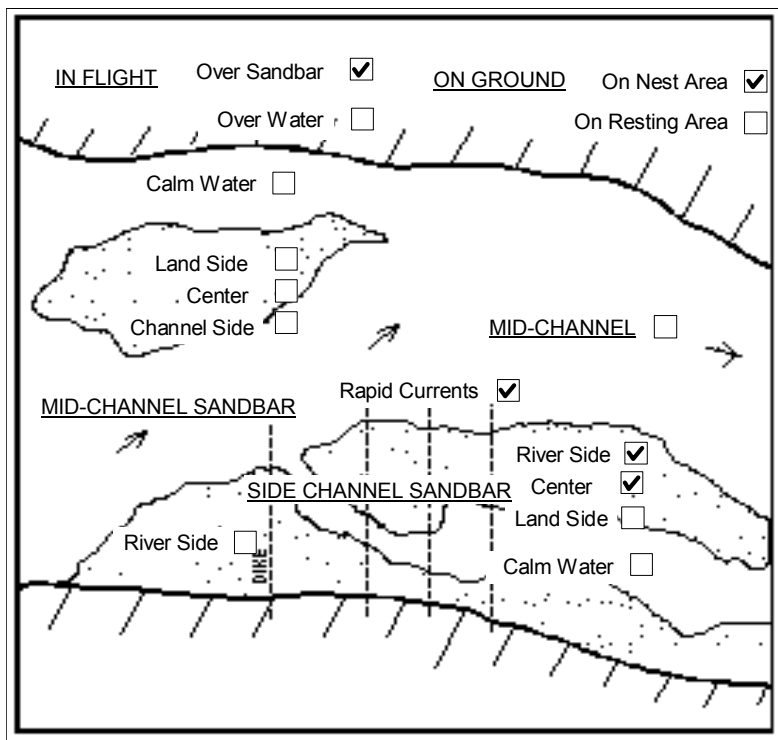
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: _____
Distance: _____ Feet

FIELD CONDITION:

Temperature: 94 °F
Rain: No
Wind: 5 mph
% Cloud: 5



OTHER NOTES:

Right Bank. Perimeter count on small, low 5 ft., flat, attached sand bar with 3 terns sitting on scrapes.

AR side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Helena = 13.9 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 12:56 RIVER MILE 599.6

LOCALITY: Bolivar MS SITE NAME: Smith Point Dikes
County/Parish State

WHERE SITED: Latitude: 33.95934
Longitude: 91.07776

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 105
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

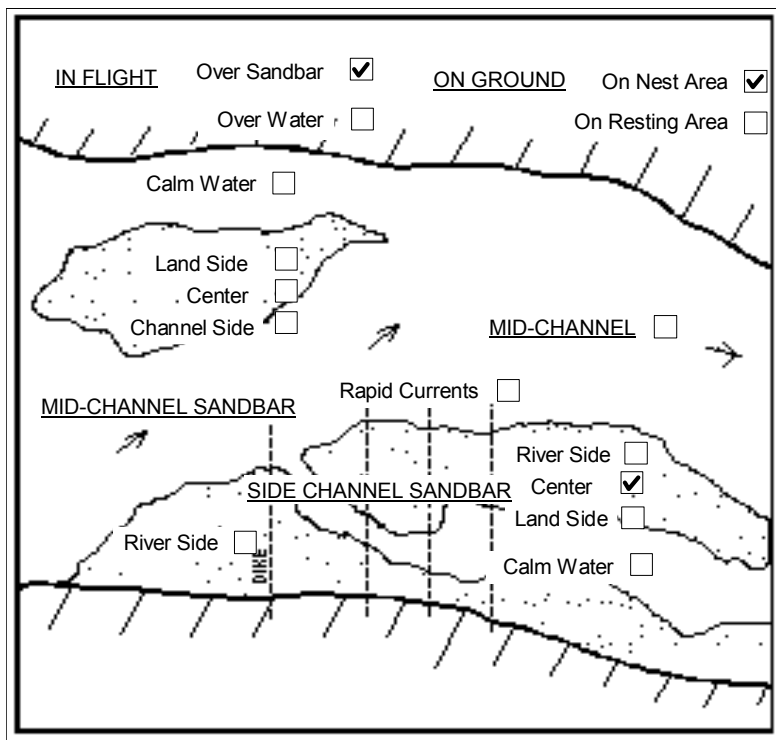
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows/Cottonwoods
Distance: 1300 Feet

FIELD CONDITION:

Temperature: 93 °F
Rain: No
Wind: 5 mph
% Cloud: 25



OTHER NOTES:

Left Bank. Perimeter count. Large, attached point bar undulating and sloping to 10 ft. in elevation. Trees present on land side of bar ~ 1500 ft. from waterline. Terns resting and courting at the waterline along with 2 sandpipers. Twenty-five sitting on scrapes, 60 Wood Storks at mouth of White river.

MS side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 14:25 RIVER MILE 595.1

LOCALITY: Desha AR SITE NAME: Victoria Bend Dikes
County/Parish State

WHERE SITED: Latitude: 33.92955
Longitude: 91.01824

Approximate Distance to Water: 500 Feet

NUMBERS SIGHTED:

Adults: 64
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

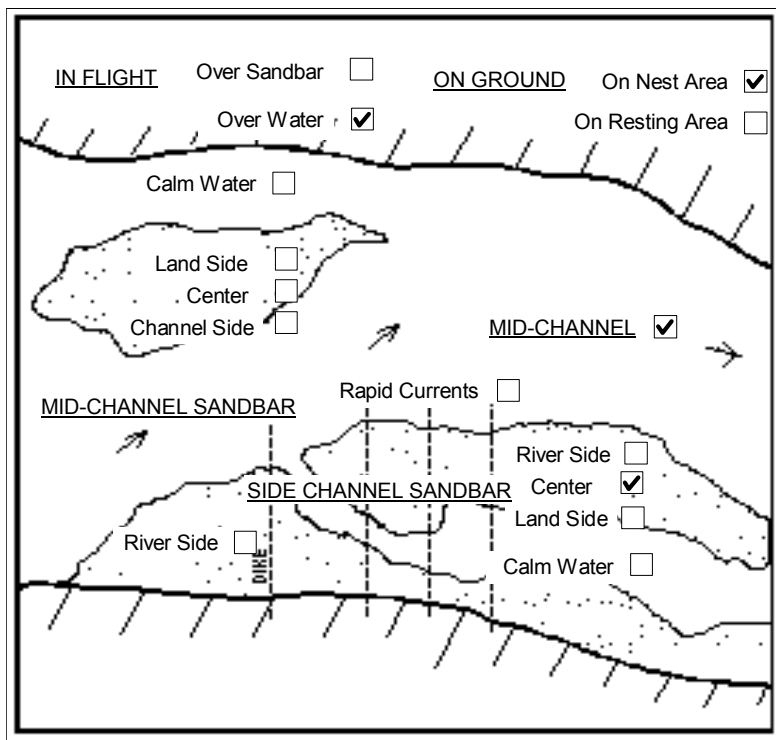
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 92 °F
Rain: No
Wind: 5 mph
% Cloud: 10



OTHER NOTES:

Right Bank. Perimeter count. Low, unattached, gently sloping sand bar 6 ft. in elevation. Ten terns sitting on scrapes.

AR side

OBSERVERS: Boyds, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 14:48 RIVER MILE 589.5

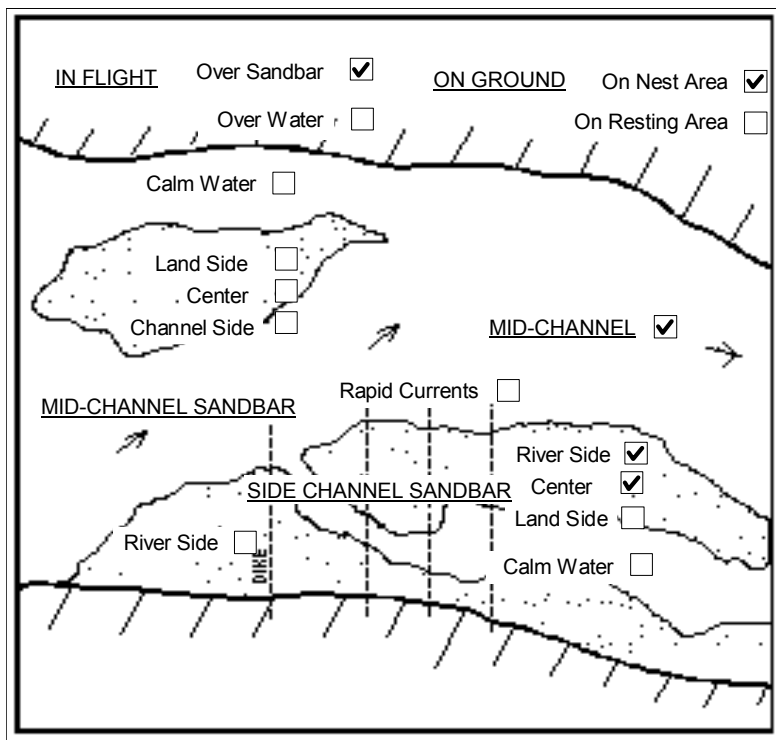
LOCALITY: Bolivar MS SITE NAME: Terrene Dikes
County/Parish State

WHERE SITED: Latitude: 33.85945
Longitude: 91.06670

Approximate Distance to Water: 70 Feet

NUMBERS SIGHTED:

Adults: 136
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 93 °F
Rain: No
Wind: 5 mph
% Cloud: 10

OTHER NOTES:

Left Bank. Flush count on long (1 mile), barely attached, undulating 6 ft. sand bar with 45 terns setting on scrapes.

MS side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 15:15 RIVER MILE 583.7

LOCALITY: Desha AR SITE NAME: Malone Field Dikes
County/Parish State

WHERE SITED: Latitude: 33.78616
Longitude: 91.05230

Approximate Distance to Water: 600 Feet

NUMBERS SIGHTED:

Adults: 62
Juveniles:
Eggs:
Chicks: Yes

SUBSTRATE:

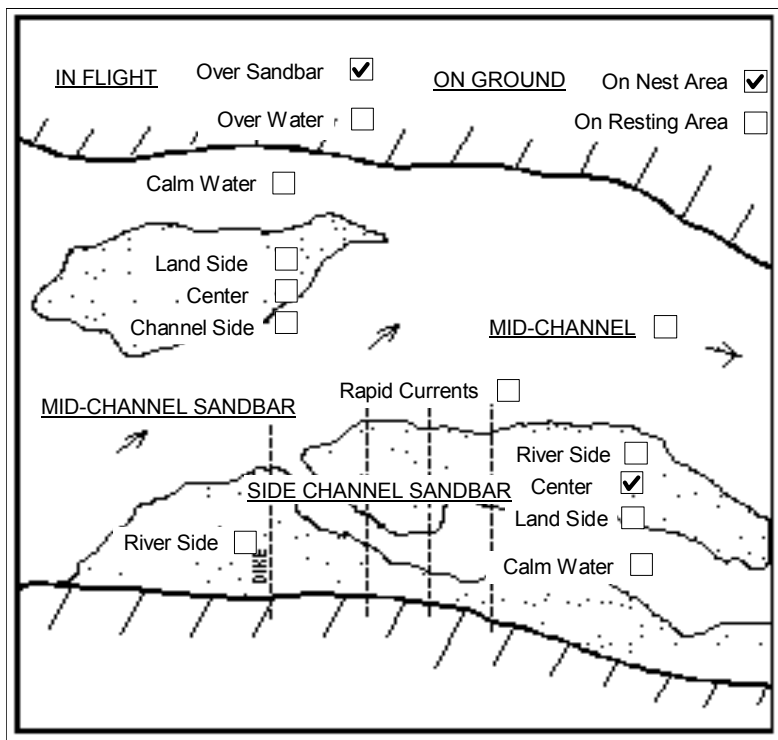
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 800 Feet

FIELD CONDITION:

Temperature: 94 °F
Rain: No
Wind: 5 mph
% Cloud: 5



OTHER NOTES:

Right Bank. Flush count along long bar 2 miles in length, low, gently sloping up to 7 ft. Many scrapes and chicks up to 2 weeks of age. Canine tracks and recent signs of human intrusion present.

AR side

OBSERVERS: Boys, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 15:40 RIVER MILE 581

LOCALITY: Desha AR SITE NAME: Cat Island
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 28
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

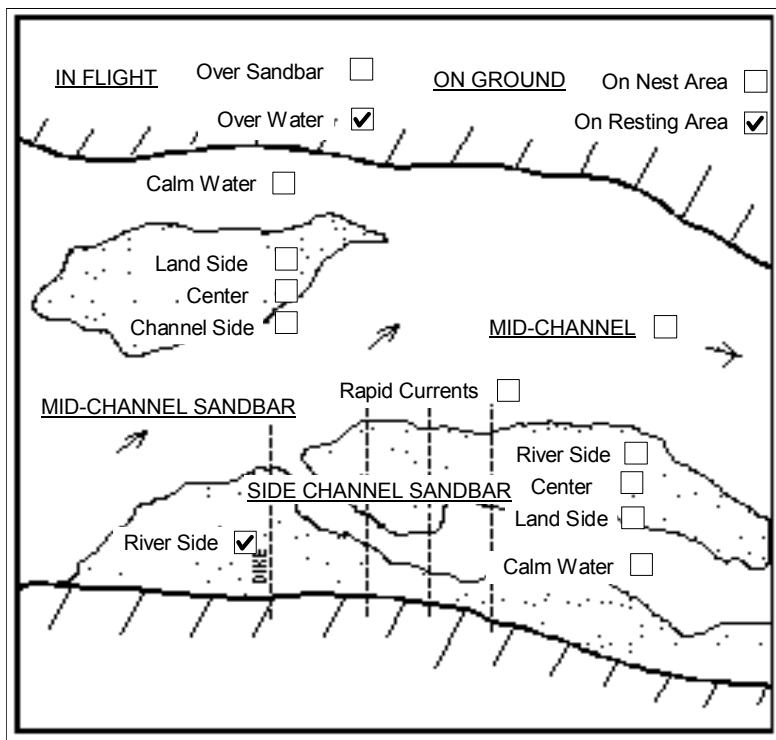
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 94 °F
Rain: No
Wind: 5 mph
% Cloud: 5



OTHER NOTES:

Right Bank. Perimeter count with all birds at the waterline resting on feeding nearby. No signs of reproduction.

AR side

OBSERVERS: Boyds, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 15:52 RIVER MILE 579

LOCALITY: Bolivar MS SITE NAME: Below Prentiss Dikes
County/Parish State

WHERE SITED: Latitude: 33.75251
Longitude: 91.13266

Approximate Distance to Water: 100 Feet

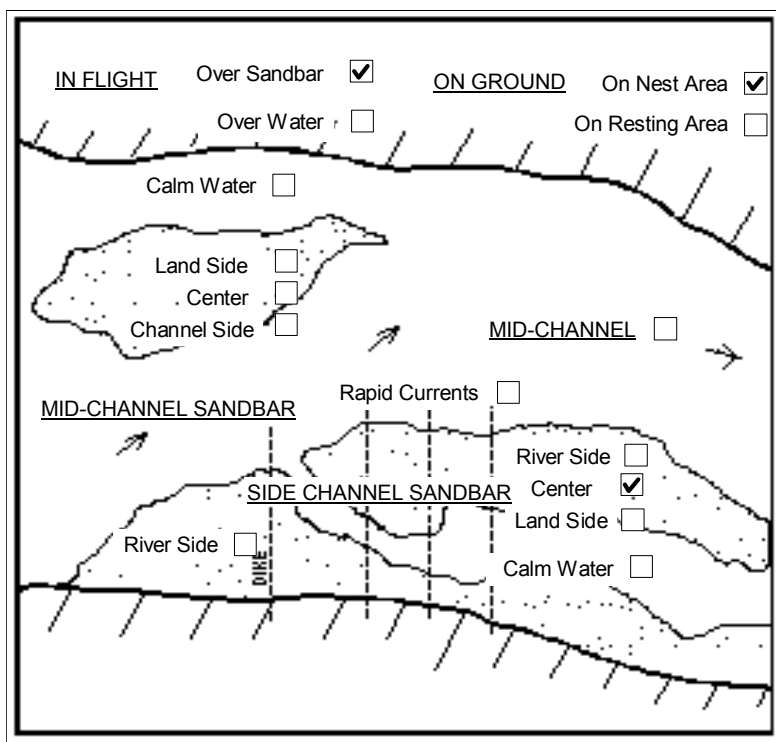
NUMBERS SIGHTED:

Adults: 94

Juveniles:

Eggs:

Chicks: No



SUBSTRATE:

Sand: ☒

Gravel: ☒

Debris: ☒

VEGETATION:

Type:

Distance: Feet

FIELD CONDITION:

Temperature: 94 °F

Rain: No

Wind: 5 mph

% Cloud: 5

OTHER NOTES:

Left Bank. Perimeter count along low, gently sloping sand bar (5 ft. elevation) with many at the waterline but 5 sitting on scrapes. Great Blue Herons, sand pipers, Kildeers and signs of human intrusion.

MS side

OBSERVERS: Boys, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 16:06 RIVER MILE 574.2

LOCALITY: Desha AR SITE NAME: Caulk Neck Cut-Off
County/Parish State

WHERE SITED: Latitude: 33.70733
Longitude: 91.17040

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 50

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☒

Debris: ☐

VEGETATION:

Type: Cottonwoods

Distance: Feet

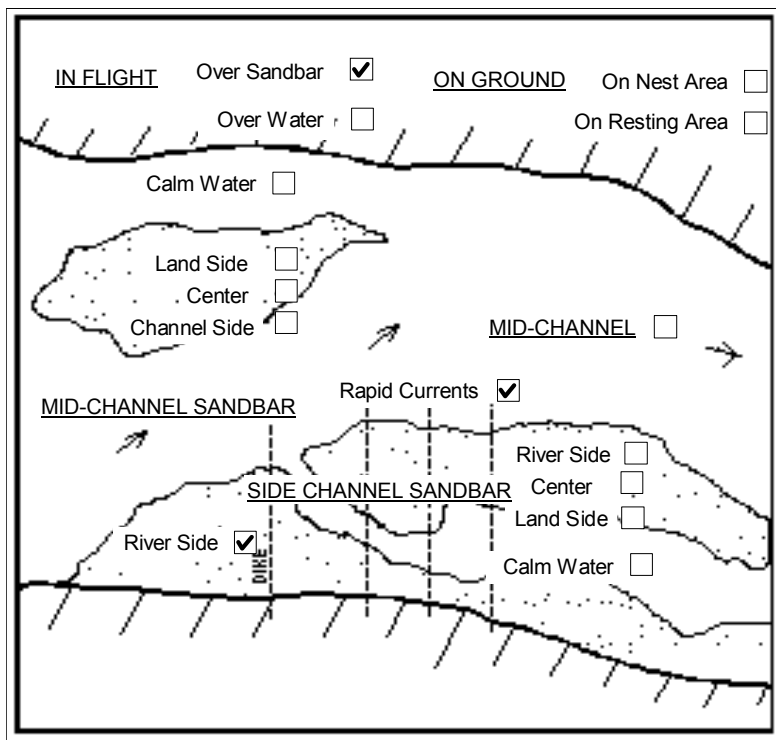
FIELD CONDITION:

Temperature: 94 °F

Rain: No

Wind: 5 mph

% Cloud: 5



OTHER NOTES:

Right Bank. Small, low (3 ft.), attached sand bar with most birds counted at the waterline. Nine sitting inland on scrapes located on gravel patches. Two Caspian Terns present.

AR side

OBSERVERS: Boys, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2008 TIME OF DAY: 16:20 RIVER MILE 569.8

LOCALITY: Bolivar MS SITE NAME: Catfish Point Dikes
County/Parish State

WHERE SITED: Latitude: 33.67964
Longitude: 91.22231

Approximate Distance to Water: 1000 Feet

NUMBERS SIGHTED:

Adults: 98
Juveniles:
Eggs:
Chicks: Yes

SUBSTRATE:

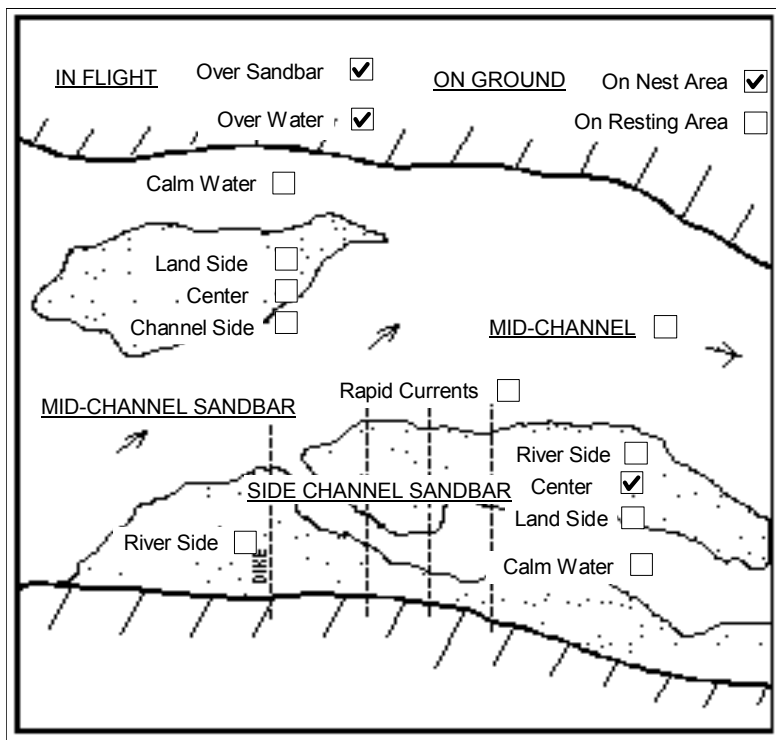
Sand: ☒
Gravel: ☒
Debris: ☒

VEGETATION:

Type: Willows/Cottonwoods
Distance: 1500 Feet

FIELD CONDITION:

Temperature: 95 °F
Rain: No
Wind: 5 mph
% Cloud: 5



OTHER NOTES:

Left Bank. Flush count. Wide, attached, flat sand and gravel bar, gently sloping up to 5 ft. elevation with lots of debris. Two week-old chicks present.

MS side

OBSERVERS: Boys, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 16:45 RIVER MILE 563.3

LOCALITY: Desha AR SITE NAME: Chicot Landing Dikes
County/Parish State

WHERE SITED: Latitude: 33.62811
Longitude: 91.14978

Approximate Distance to Water: 1300 Feet

NUMBERS SIGHTED:

Adults: 61

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

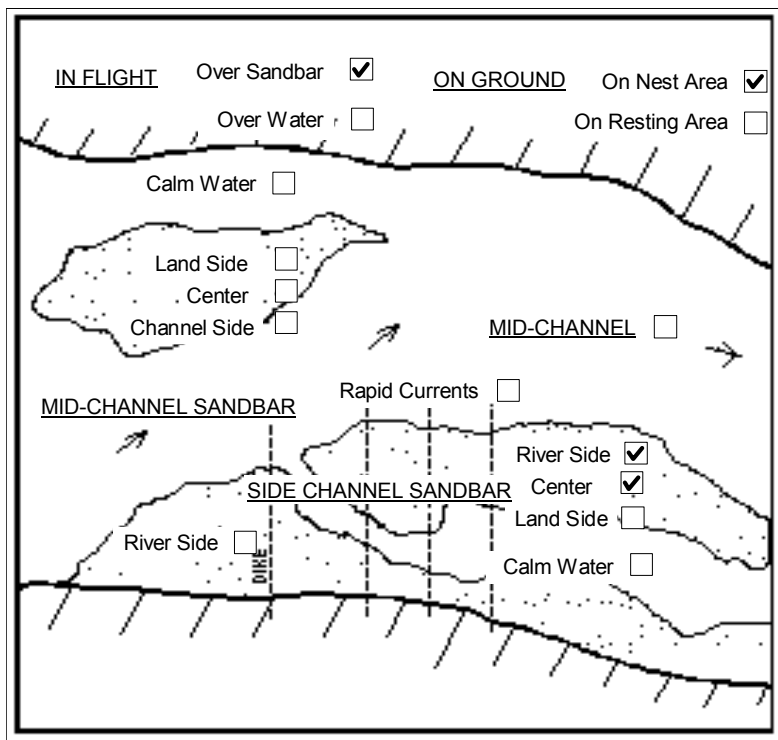
FIELD CONDITION:

Temperature: 93 °F

Rain: No

Wind: 5 mph

% Cloud: 5



OTHER NOTES:

Right Bank. Flush count. Large (10 ft. elevation), attached, sand bar behind trailer dikes above Choctaw Island. Five terns sitting on scrapes.

AR side

OBSERVERS: Boys, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 17:07 RIVER MILE 559.5

LOCALITY: Desha AR SITE NAME: Choctaw Bar Island
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 8

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

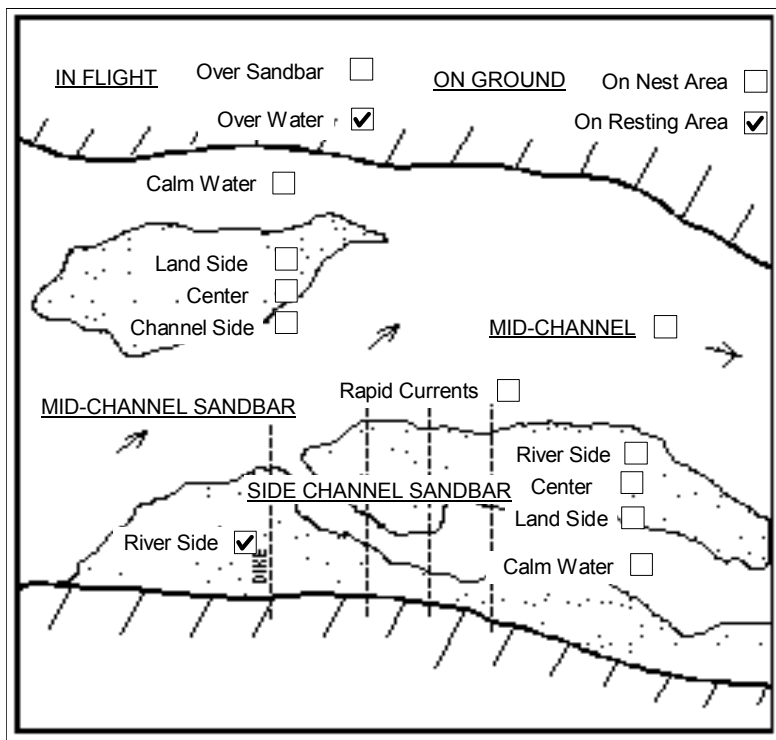
FIELD CONDITION:

Temperature: 93 °F

Rain: No

Wind: 5 mph

% Cloud: 5



OTHER NOTES:

Right Bank. Perimeter count along attached bar downstream point of Choctaw Bar Island. Resting bar only.

AR side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 17:15 RIVER MILE 553.6

LOCALITY: Bolivar MS SITE NAME: Hunington Point
County/Parish State

WHERE SITED: Latitude: 33.54860
Longitude: 91.22844

Approximate Distance to Water: 50 Feet

NUMBERS SIGHTED:

Adults: 18
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

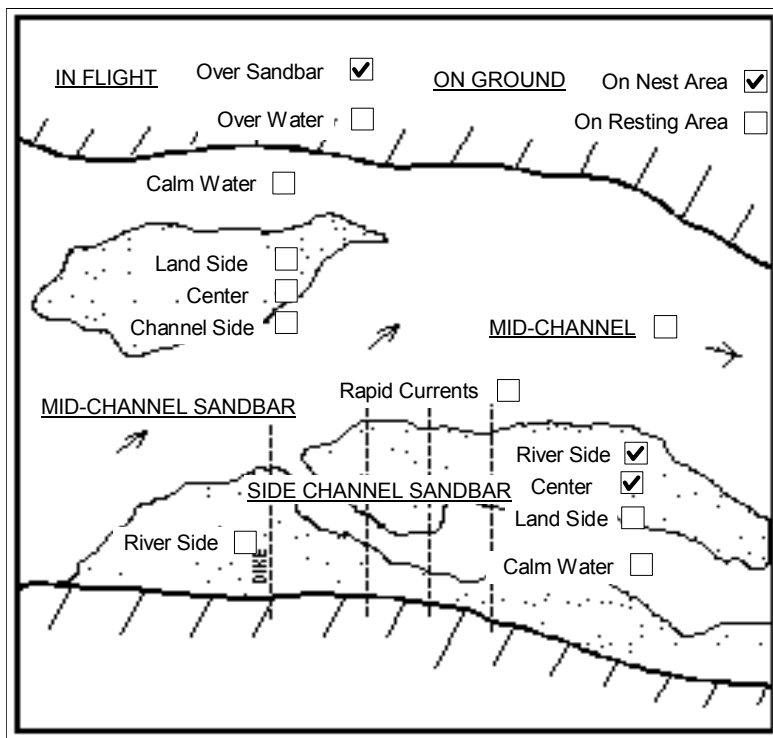
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 93 °F
Rain: No
Wind: 5 mph
% Cloud: 5



OTHER NOTES:

Left Bank. Perimeter count along low, flat, small sand bar (200 x 2,000 ft.), unattached with many resting at the waterline and one sitting on scrape.

MS side

OBSERVERS: Boyds, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/15/2009 TIME OF DAY: 17:30 RIVER MILE 550.3

LOCALITY: Bolivar MS SITE NAME: Offutt Landing
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 19

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

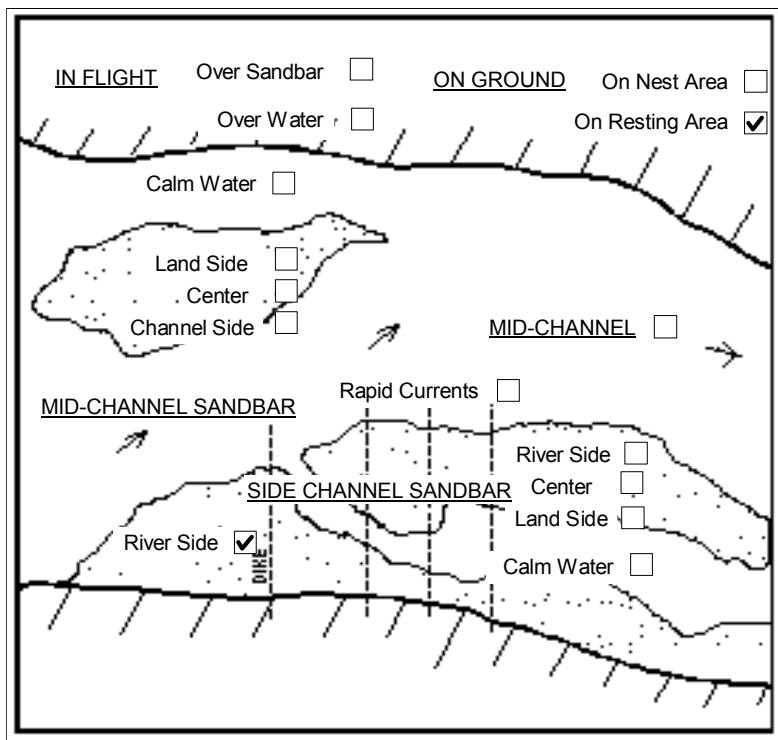
FIELD CONDITION:

Temperature: 93 °F

Rain: No

Wind: 5 mph

% Cloud: 5



OTHER NOTES:

Left Bank. Perimeter count yields 19 resting at waterline but no other activity.

MS side

OBSERVERS: Boyd, Campen, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Arkansas City = 14.4 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 11:40 RIVER MILE 533.4

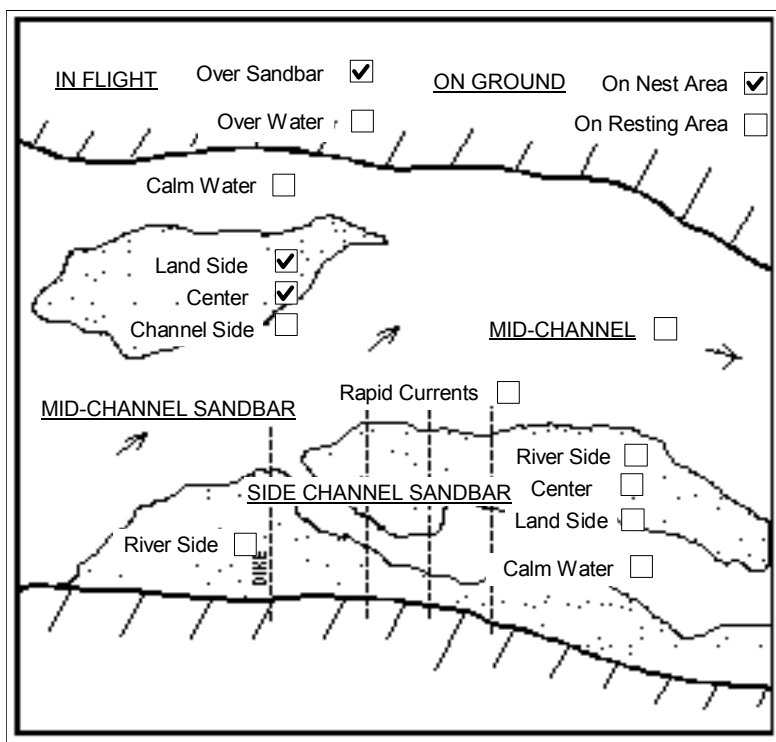
LOCALITY: Washignton MS SITE NAME: Island #84 Dikes
County/Parish State

WHERE SITED: Latitude: 33.31903
Longitude: 91.17683

Approximate Distance to Water: 50 Feet

NUMBERS SIGHTED:

Adults: 650
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 93 °F
Rain: No
Wind: 10 mph
% Cloud: 75

OTHER NOTES:

Left Bank. Flush count along gently sloping, 4 ft. high sand bar, gently undulating and unattached. Colony 3 miles long x 1/2 mile wide. Many sitting on scrapes all across bar.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 12:10 RIVER MILE 528.6

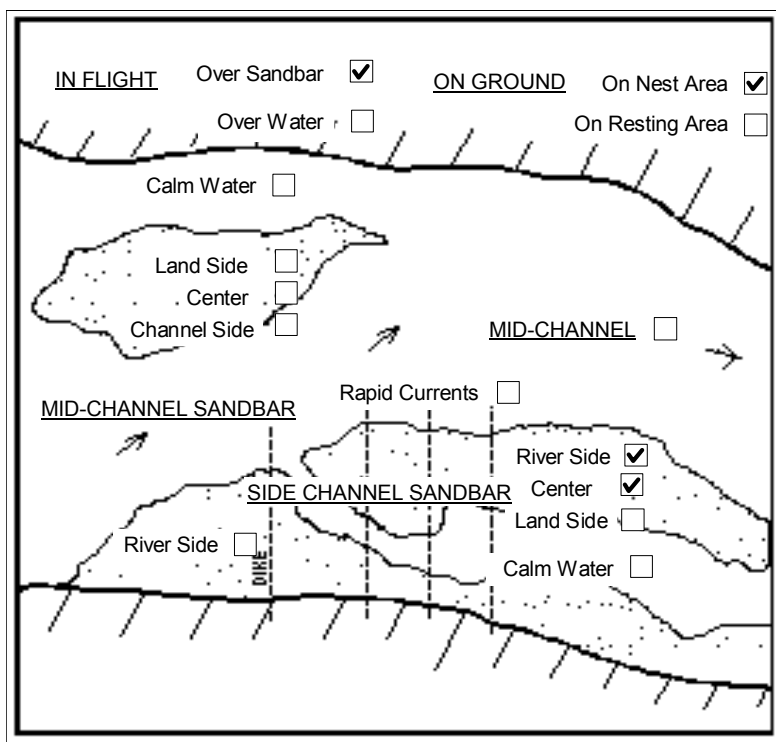
LOCALITY: Washington MS SITE NAME: Refuge Dikes
County/Parish State

WHERE SITED: Latitude: 33.26586
Longitude: 91.12115

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 68
Juveniles:
Eggs: 2,3
Chicks: Yes



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 80 Feet

FIELD CONDITION:

Temperature: 93 °F
Rain: No
Wind: 10 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Flush count along steeply sloping island up to 30 ft. elevation with small willows on top, unattached with human and coyote tracks and several abandoned eggs. Six 1 week-old chicks observed.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FLY ☐ BOAT ☒

DATE: 7/16/2009 TIME OF DAY: 12:20 RIVER MILE 526.5

WHERE SITED: Latitude: NA
 Longitude: NA

NUMBERS SIGHTED:

Adults: 3

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐Debris: ☐

VEGETATION:

Type: _____

Distance: Feet

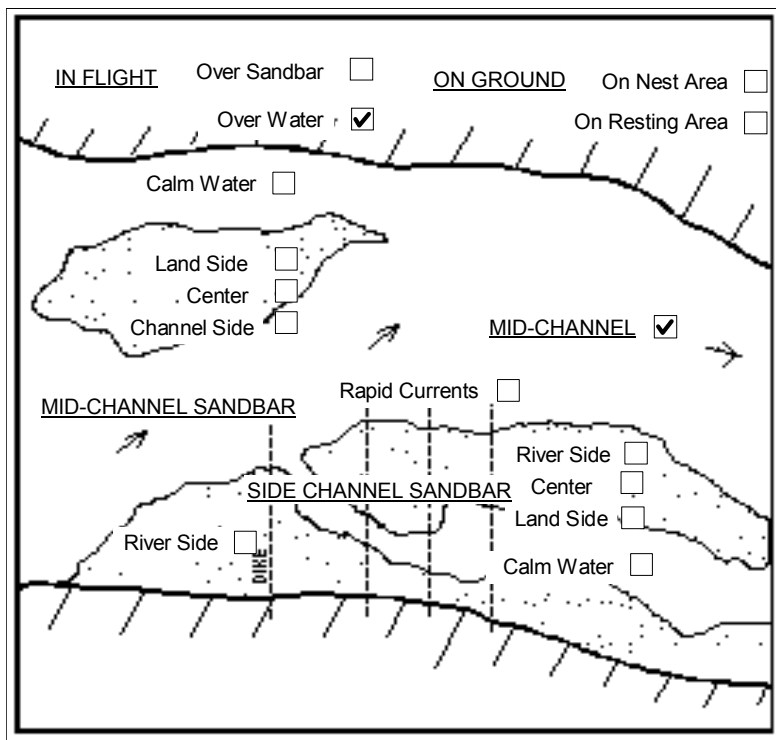
FIELD CONDITION:

Temperature: 89 °F

Rain: No

Wind: 15 mph

% Cloud: 80



OTHER NOTES:

Three terns in transit mid-channel.

AR side

OBSERVERS: Boyds, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: $\frac{\text{Greenville}}{(\text{Gage Location})} = \frac{25.0 \text{ F}}{(\text{Elevation})}$

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 12:30 RIVER MILE 523

LOCALITY: Chicot AR SITE NAME: Seven Oaks Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 7

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☒

Debris: ☐

VEGETATION:

Type:

Distance: Feet

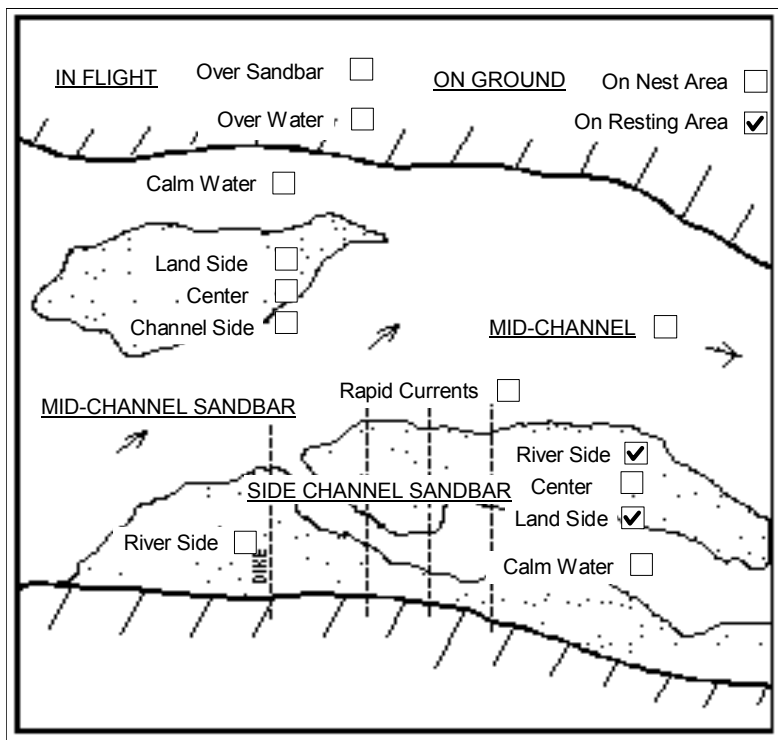
FIELD CONDITION:

Temperature: 89 °F

Rain: No

Wind: 15 mph

% Cloud: 80



OTHER NOTES:

Right Bank. Perimeter count along small (30 x 100ft.), very low bar of sand and gravel. Resting bar only.

AR side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 12:40 RIVER MILE 519.1

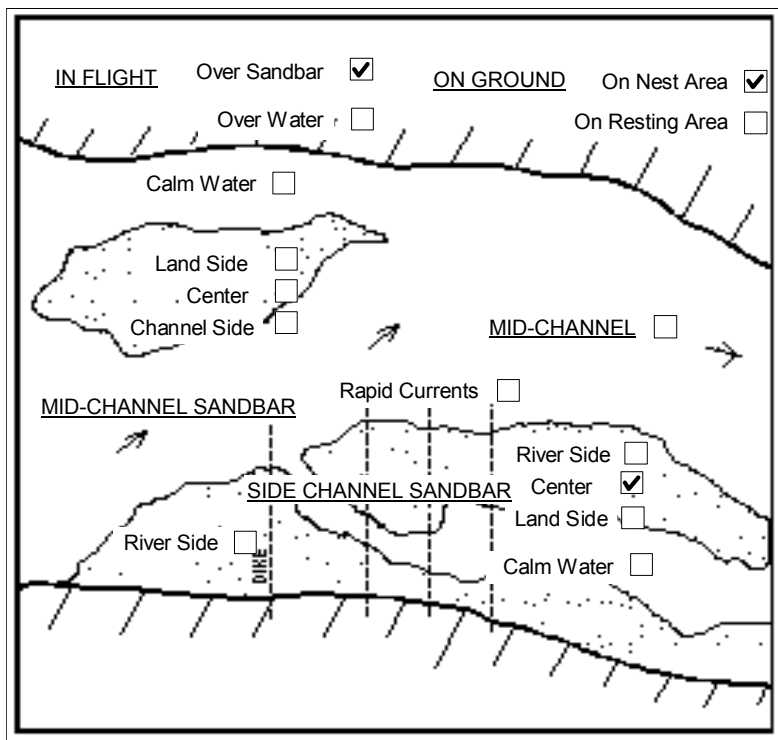
LOCALITY: Chicot AR SITE NAME: Island #86 Dikes Upper
County/Parish State

WHERE SITED: Latitude: 33.13810
Longitude: 91.09719

Approximate Distance to Water: 1200 Feet

NUMBERS SIGHTED:

Adults: 24
Juveniles:
Eggs: 1
Chicks: Yes



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 89 °F
Rain: No
Wind: 15 mph
% Cloud: 80

OTHER NOTES:

Right Bank. Flush count on wooded island. Colony on sand exposed on downstream point. Bar gently sloping up to 40 ft. in elevation, gently undulating with some large debris. Egg shells present along with 3 chicks 4 days to 1 week old, and 5 nests.

AR side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 12:50 RIVER MILE 517.5

LOCALITY: Washington MS SITE NAME: Island #86 Dikes Lower
County/Parish State

WHERE SITED: Latitude: 33.12731
Longitude: 91.09986

Approximate Distance to Water: 60 Feet

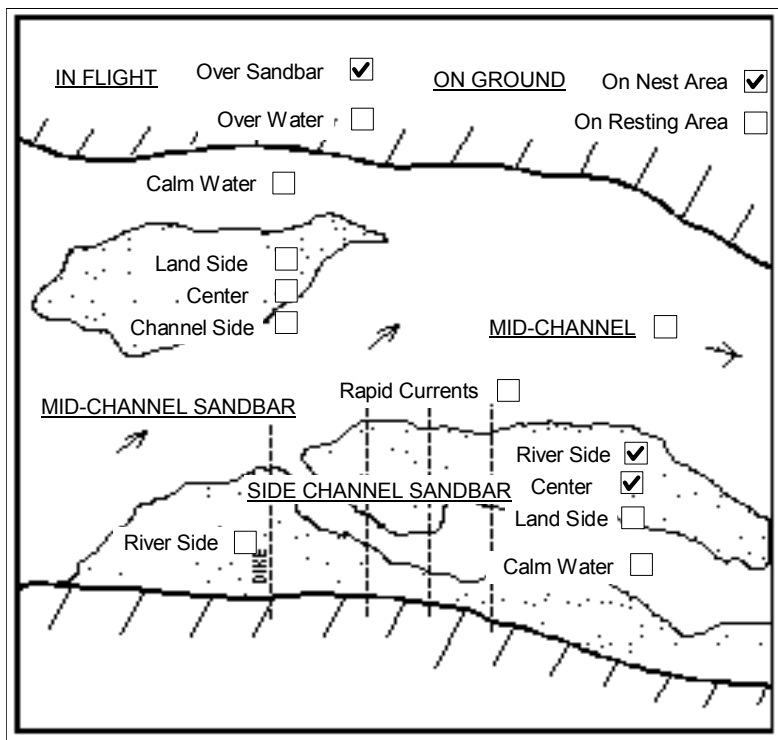
NUMBERS SIGHTED:

Adults: 68

Juveniles:

Eggs:

Chicks: No



SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

FIELD CONDITION:

Temperature: 88 °F

Rain: No

Wind: 15 mph

% Cloud: 70

OTHER NOTES:

Right Bank. Unattached, low (3 ft.), medium size (1/2 x 1/4 mile), gently rolling sand bar with colony along entire length.

AR side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 13:03 RIVER MILE 514.0

LOCALITY: Washington MS SITE NAME: Leota Dikes
County/Parish State

WHERE SITED: Latitude: 33.09130
Longitude: 91.16341

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 25
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

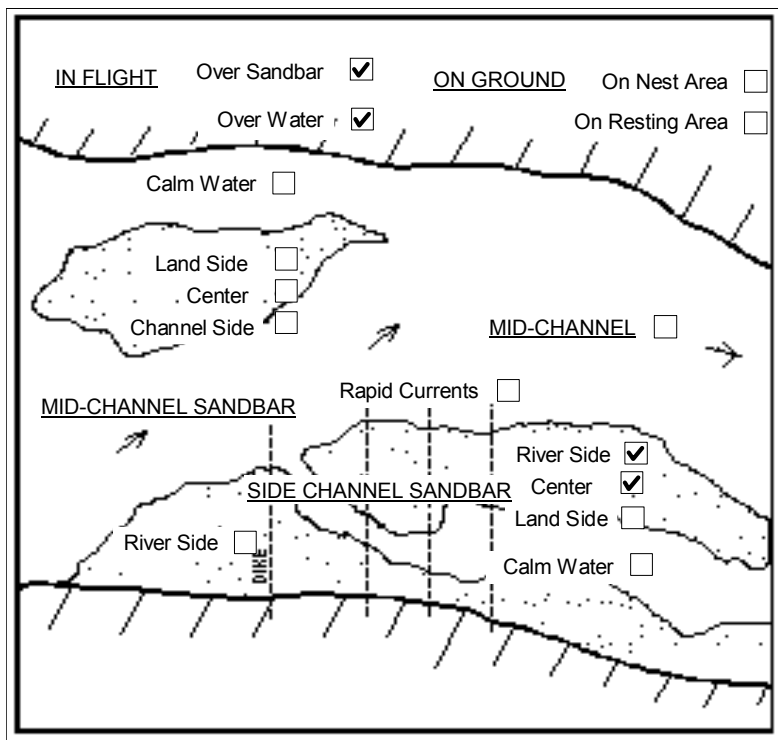
Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: No
Wind: 15 mph
% Cloud: 50



OTHER NOTES:

Left Bank. Perimeter count along low, sand and gravel bar. Several terns at the water line, but 2 sitting on scrapes.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 13:20 RIVER MILE 508.5

LOCALITY: Chicot AR SITE NAME: Cracraft Lower Dikes
County/Parish State

WHERE SITED: Latitude: 33.0375
Longitude: 91.1567

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 49
Juveniles: _____
Eggs: 3
Chicks: No

SUBSTRATE:

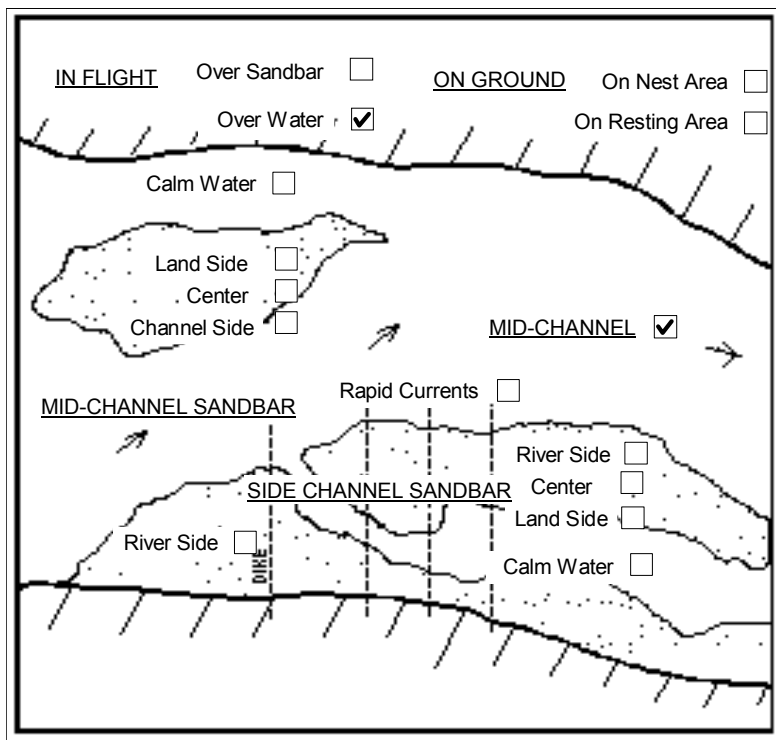
Sand: ☐
Gravel: ☐
Debris: ☐

VEGETATION:

Type: _____
Distance: _____ Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: No
Wind: 15 mph
% Cloud: 50



OTHER NOTES:

Three terns in transit, mid-channel.

AR side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 13:30 RIVER MILE 503

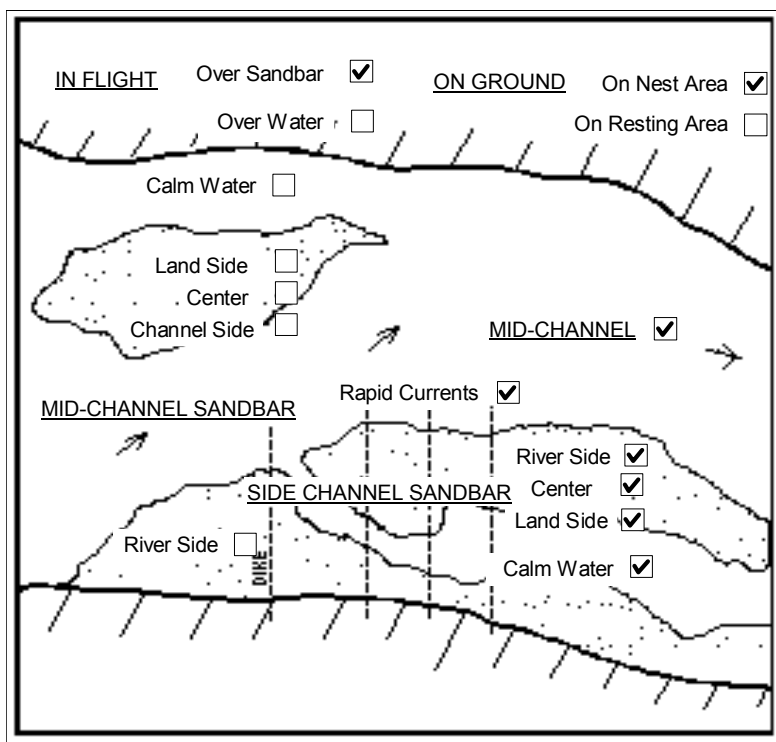
LOCALITY: Issaquena MS SITE NAME: Corregidor Dikes
County/Parish State

WHERE SITED: Latitude: 32.95889
Longitude: 91.3890

Approximate Distance to Water: 70 Feet

NUMBERS SIGHTED:

Adults: 800
Juveniles:
Eggs: 2,3
Chicks: Yes



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: No
Wind: 15 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Flush count. Long (3 mile x 1 mile) sand and mud bar in bend of Sarah Cut-Off, unattached at present river stage and up to 12 ft. elevation. Colony across entire bar with over 200 birds sitting on scrapes. Many chicks up to 1 week of age present. Deer and human tracks present.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 13:42 RIVER MILE 499.5

LOCALITY: East Carroll LS SITE NAME: Wisou Point Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 4

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

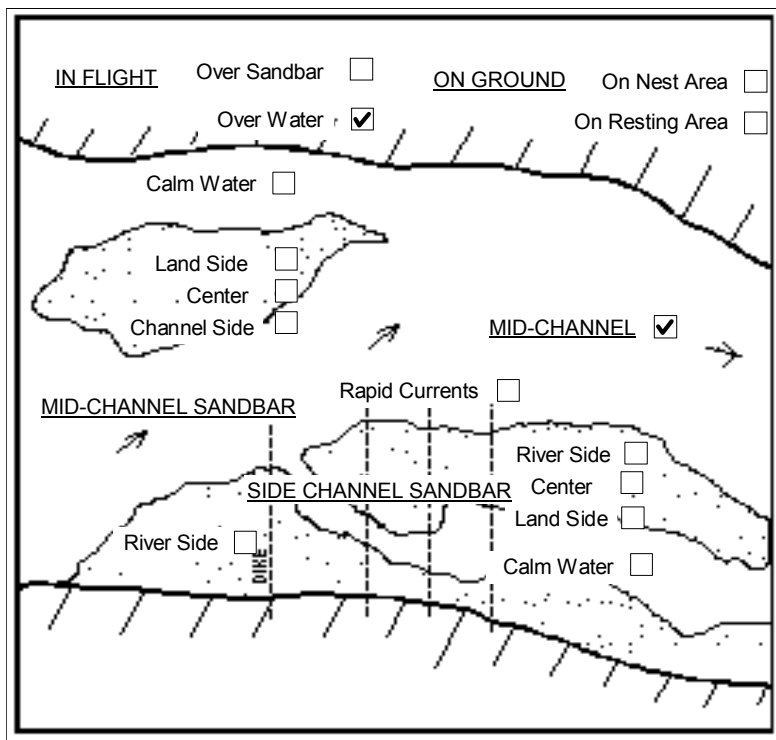
FIELD CONDITION:

Temperature: 91 °F

Rain: No

Wind: 15 mph

% Cloud: 90



OTHER NOTES:

Four terns in transit.

LA side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 14:25 RIVER MILE 491.3

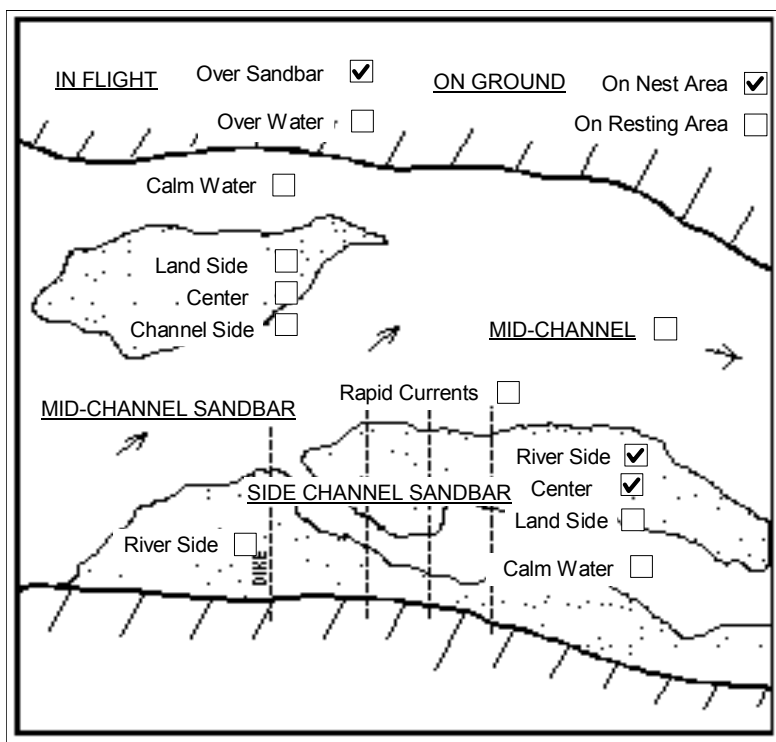
LOCALITY: Issaquena MS SITE NAME: Baleshed Landing Dikes
County/Parish State

WHERE SITED: Latitude: 32.84701
Longitude: 91.12215

Approximate Distance to Water: 50 Feet

NUMBERS SIGHTED:

Adults: 100
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 92 °F
Rain: No
Wind: 10 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Perimeter count along very long, clean, extended sand bar (1 mile x 200 ft.) upstream from Stack Island. Eighteen terns observed sitting on scrapes.

MS side

OBSERVERS: Boyds, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Greenville = 25.0 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 14:40 RIVER MILE 482.2

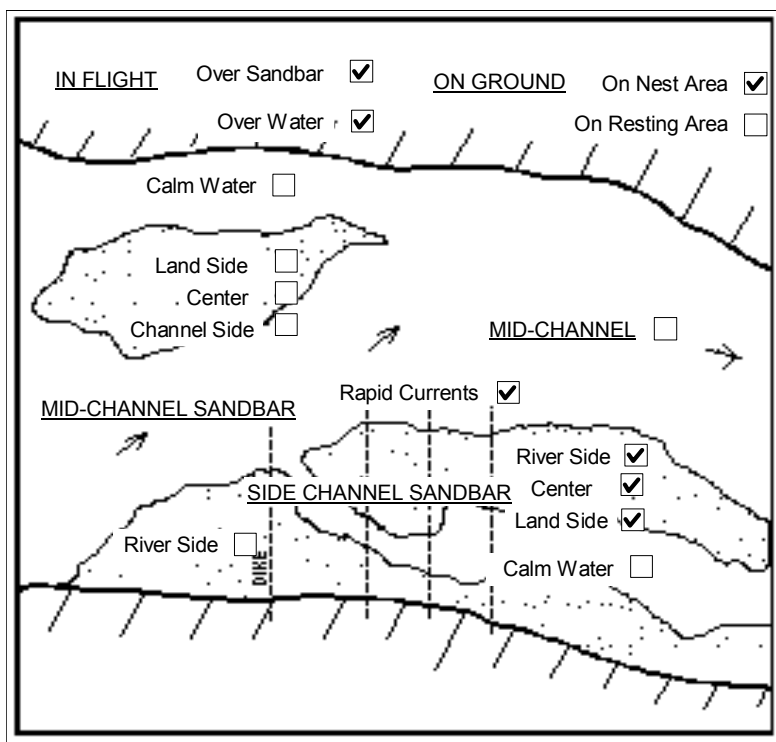
LOCALITY: Issaquena MS SITE NAME: Ajax Bar Dikes Upper
County/Parish State

WHERE SITED: Latitude: 32.74483
Longitude: 91.14117

Approximate Distance to Water: 200 Feet

NUMBERS SIGHTED:

Adults: 91
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: Yes
Wind: 10 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Flush count between "Y" shaped dike with colony 1 mile x 400 ft. and empty scrapes with half-shells. Goose tracks along with 1 Black Tern and 80 sandpipers.

MS side

OBSERVERS: Boyds, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 20.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 14:55 RIVER MILE 480

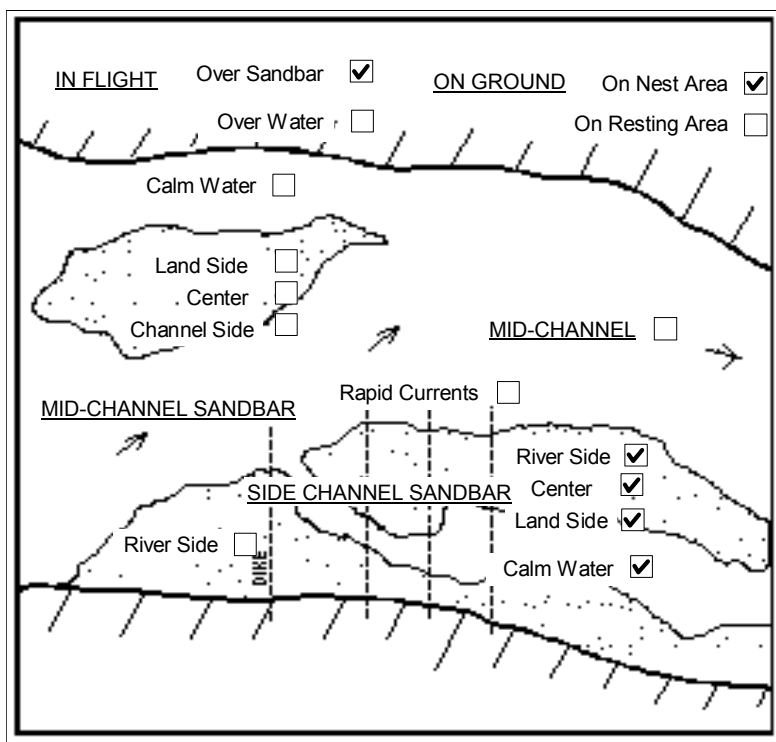
LOCALITY: Issaquena MS SITE NAME: Ajax Bar Dikes Lower
County/Parish State

WHERE SITED: Latitude: 32.73710
Longitude: 91.11741

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 375
Juveniles:
Eggs: 2,3
Chicks: Yes



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: Yes
Wind: 10 mph
% Cloud: 95

OTHER NOTES:

Left Bank. Flush count on smaller, unattached sand bar below Y shaped dike 2000 x 700 ft. and up to 35 ft. in elevation Several chicks up to 1 week of age. Fifteen sitting on scrapes along wrack lines.

MS side

OBSERVERS: Boyds, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 20.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 15:10 RIVER MILE 477

LOCALITY: East Carroll LA SITE NAME: Point Lookout Dike
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 2

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

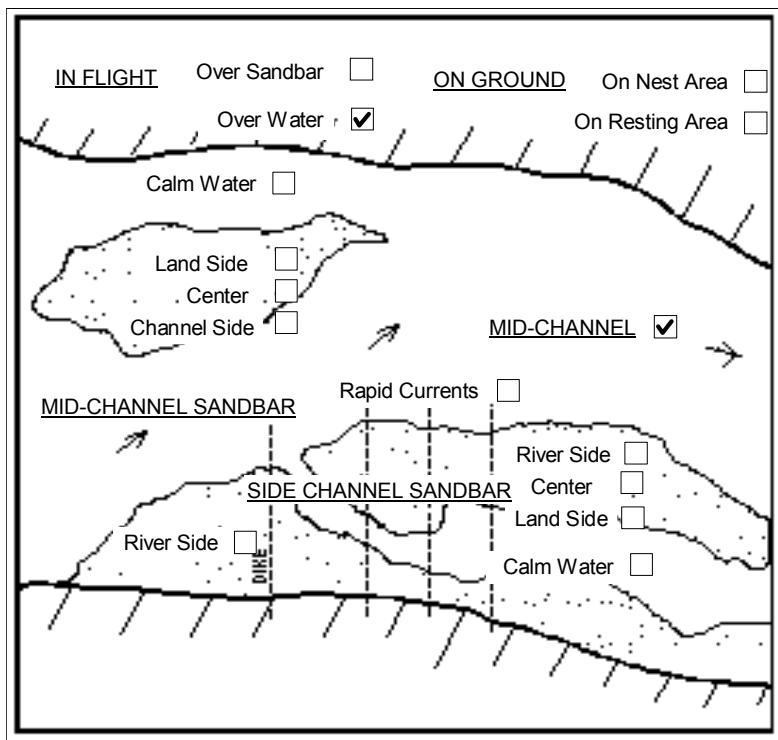
FIELD CONDITION:

Temperature: 91 °F

Rain: No

Wind: 10 mph

% Cloud: 70



OTHER NOTES:

Two terns flying in transit mid-channel.

LA side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 20.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 15:20 RIVER MILE 470

LOCALITY: Issaquena MS SITE NAME: Arcadia Point Dikes
County/Parish State

WHERE SITED: Latitude: na
Longitude: na

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 4

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

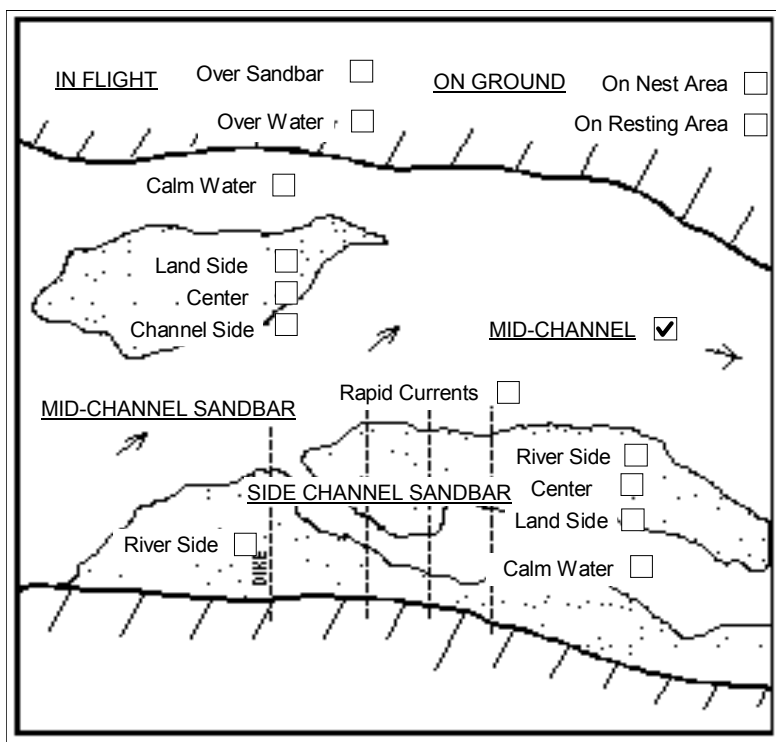
FIELD CONDITION:

Temperature: 91 °F

Rain: No

Wind: 10 mph

% Cloud: 60



OTHER NOTES:

Four terns flying in transit mid-channel.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 20.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 15:43 RIVER MILE 461

LOCALITY: East Carroll LA SITE NAME: Willow Cutoff Dikes
County/Parish State

WHERE SITED: Latitude: 32.54429
Longitude: 91.10239

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 75

Juveniles: _____

Eggs: _____

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type: _____

Distance: _____ Feet

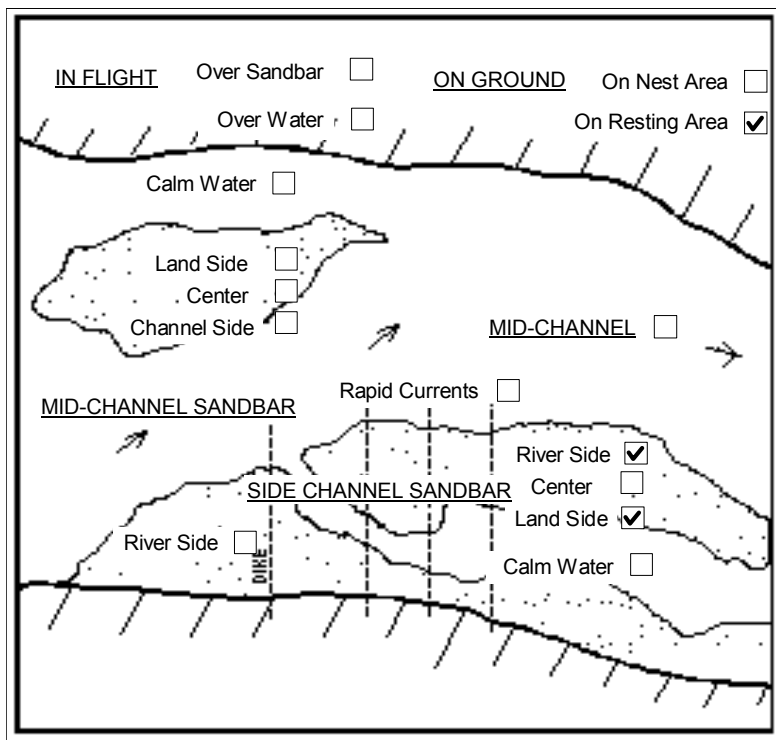
FIELD CONDITION:

Temperature: 90 °F

Rain: No

Wind: 10 mph

% Cloud: 25



OTHER NOTES:

Right Bank. Perimeter count along clean, flat sand bar, gently sloping up to 10 ft. elevation. All terns resting at the waterline on upstream end.

LA side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 20.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 16:09 RIVER MILE 447.3

LOCALITY: Madison LA SITE NAME: Marshall Cutoff Dikes
County/Parish State

WHERE SITED: Latitude: 32.40044
Longitude: 90.99691

Approximate Distance to Water: 30 Feet

NUMBERS SIGHTED:

Adults: 40

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☒

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

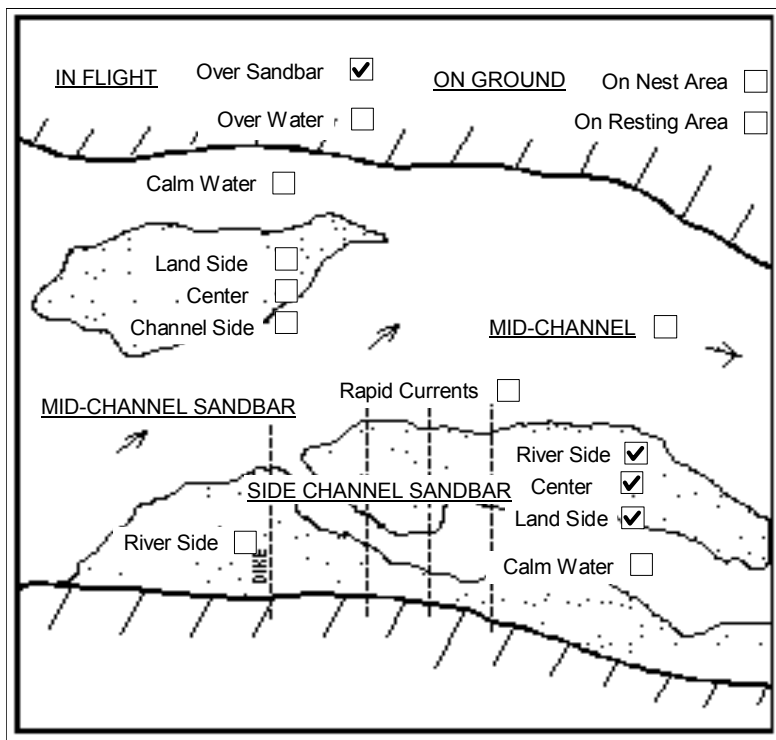
FIELD CONDITION:

Temperature: 91 °F

Rain: No

Wind: 5 mph

% Cloud: 40



OTHER NOTES:

Right Bank. Perimeter count along low (2 ft.), small (200 x 75 ft.), clean sand bar with 2 observed sitting on scrapes.

LA side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 20.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/16/2009 TIME OF DAY: 16:30 RIVER MILE 441.5

LOCALITY: Warren MS SITE NAME: Yazoo Cutoff
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 2

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

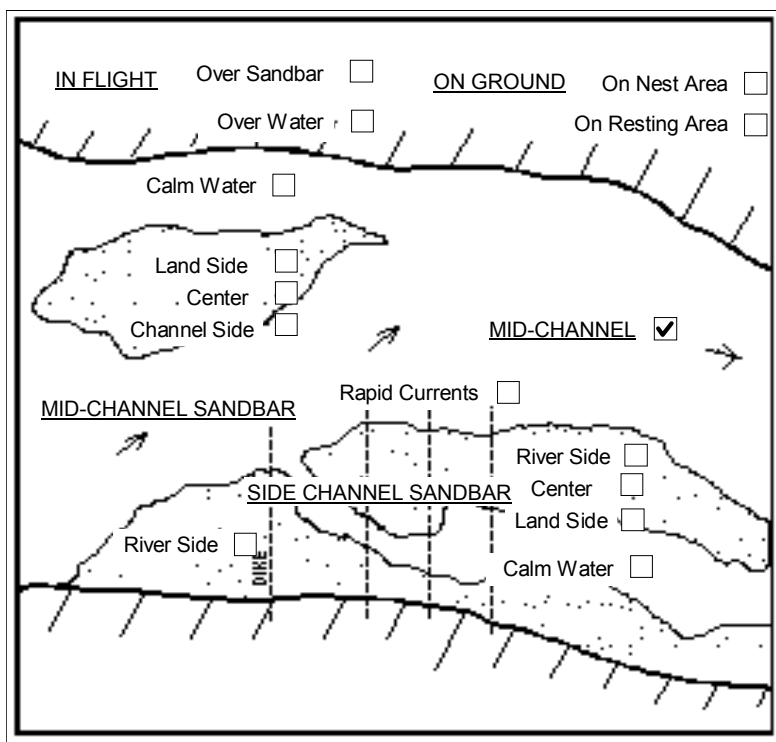
FIELD CONDITION:

Temperature: 91 °F

Rain: No

Wind: 5 mph

% Cloud: 30



OTHER NOTES:

Two terns flying in transit mid-channel.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 20.3 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 8:42 RIVER MILE 428.7

LOCALITY: Warren MS SITE NAME: Below Racetrack Dikes
County/Parish State

WHERE SITED: Latitude: 32.24336
Longitude: 90.97723

Approximate Distance to Water: 20 Feet

NUMBERS SIGHTED:

Adults: 79
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

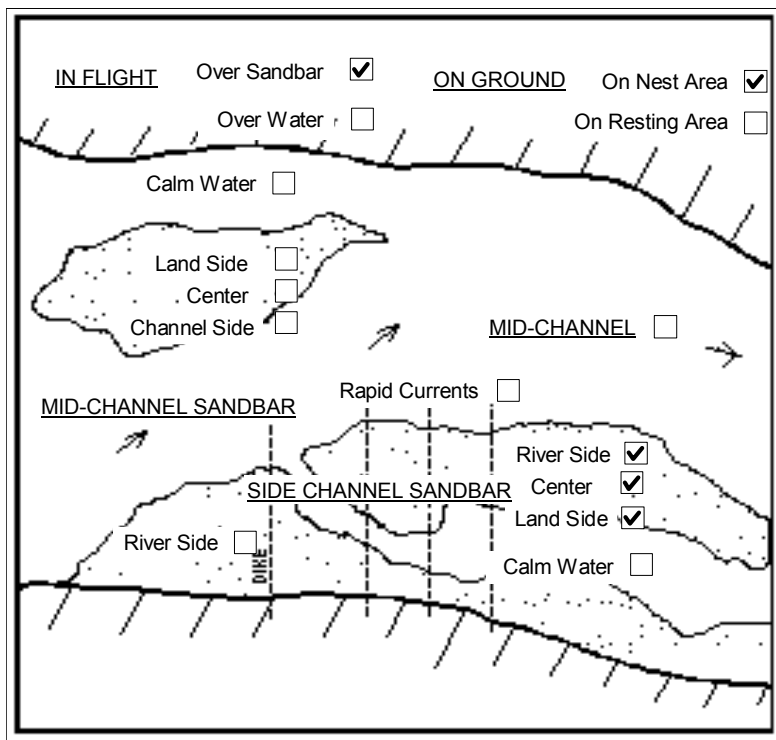
Sand: ☒
Gravel: ☒
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 78 °F
Rain: No
Wind: 5 mph
% Cloud: 95



OTHER NOTES:

Left Bank. Perimeter count along low(1.5 ft.) series of flat, unattached, sand bars with patches of gravel (3 miles x 200 ft.) with 22 terns sitting on nest. Five Black Terns, 1 Pied-billed Grebe, 2 Avocets, 1 Great Blue Heron, 1 Cattle Egret, and 1 Spotted Sandpiper observed also.

MS side

OBSERVERS: Boyds, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 19.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 8:55 RIVER MILE 419.0

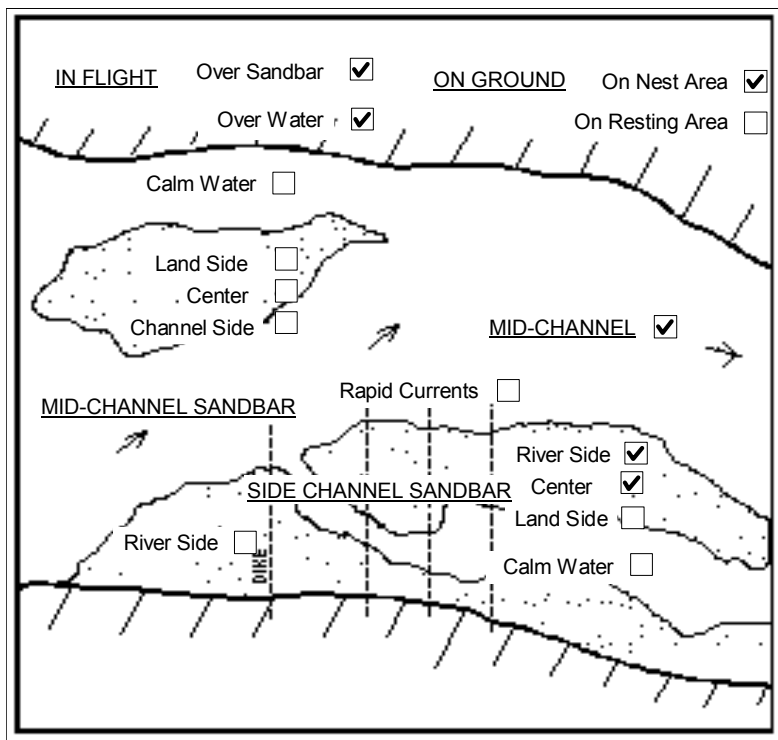
LOCALITY: Warren MS SITE NAME: Newton Bend Dikes
County/Parish State

WHERE SITED: Latitude: 32.12355
Longitude: 91.03762

Approximate Distance to Water: 150 Feet

NUMBERS SIGHTED:

Adults: 35
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 77 °F
Rain: No
Wind: 5 mph
% Cloud: 95

OTHER NOTES:

Right Bank. Perimeter count along long, attached, undulating sand bar (1 mile x 300 ft.) with six terns setting on scrapes.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 19.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 9:05 RIVER MILE 415.2

LOCALITY: Tensas LA SITE NAME: Togo Island Dikes Upper
County/Parish State

WHERE SITED: Latitude: 32.11706
Longitude: 91.10526

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 45
Juveniles: _____
Eggs: _____
Chicks: No

SUBSTRATE:

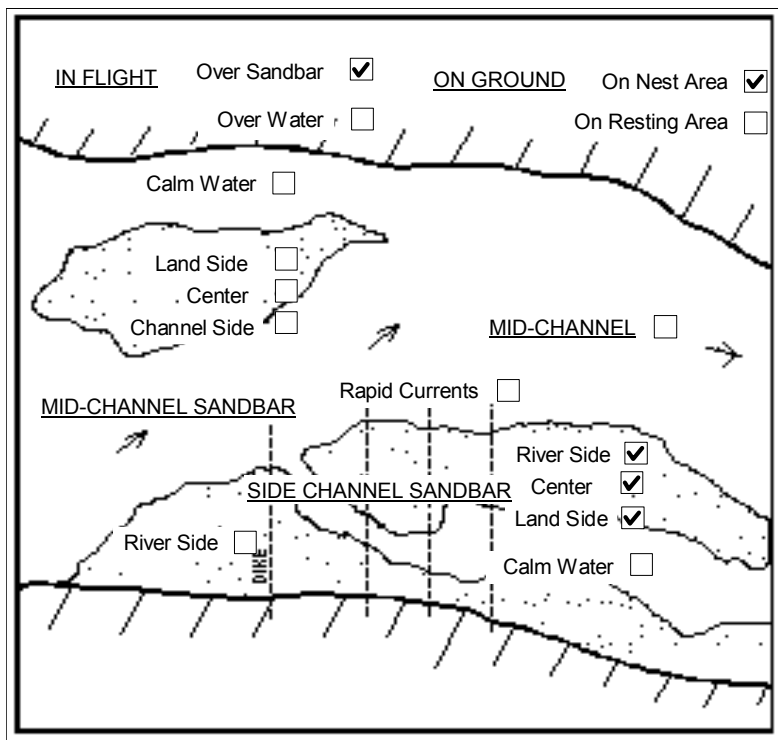
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: _____
Distance: _____ Feet

FIELD CONDITION:

Temperature: 78 °F
Rain: No
Wind: 5 mph
% Cloud: 98



OTHER NOTES:

Left Bank. Perimeter count on unattached, low, flat sand bar (800 x 100 ft.). Twelve terns sitting on scrapes.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 19.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 9:10 RIVER MILE 414.3

LOCALITY: Tensas LA SITE NAME: togo Island Dikes Lower
County/Parish State

WHERE SITED: Latitude: 32.10746
Longitude: 91.10071

Approximate Distance to Water: 75 Feet

NUMBERS SIGHTED:

Adults: 15
Juveniles:
Eggs:
Chicks: No

SUBSTRATE:

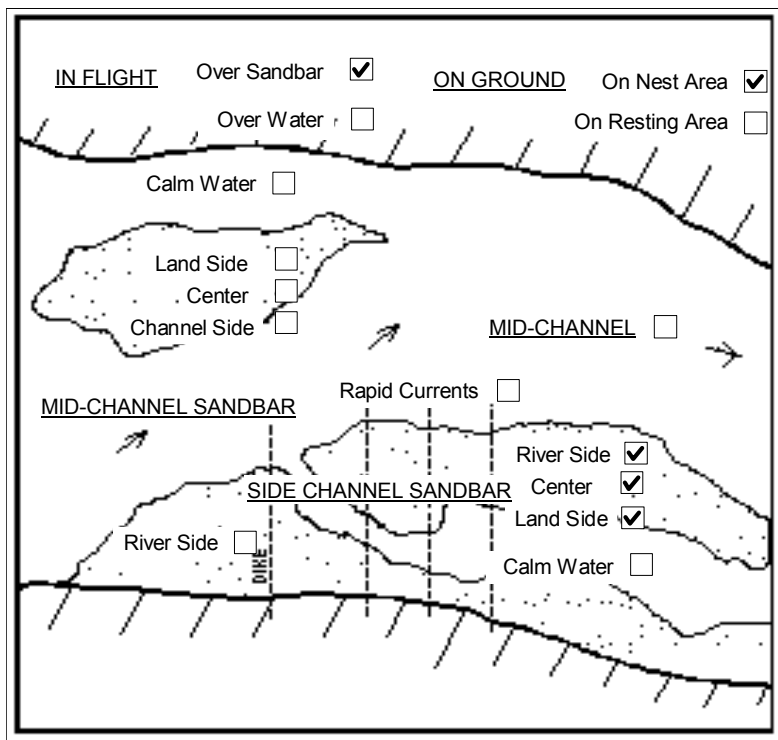
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 79 °F
Rain: No
Wind: 5 mph
% Cloud: 98



OTHER NOTES:

Left Bank. Another drift count just below upper colony yields 5 terns on scrapes. Sand bar is low and small (900 x 300 ft.), unattached with no debris.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 19.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 9:16 RIVER MILE 409.7

LOCALITY: Claiborne MS SITE NAME: Yucatan Dikes
County/Parish State

WHERE SITED: Latitude: 32.07082
Longitude: 91.07567

Approximate Distance to Water: 75 Feet

NUMBERS SIGHTED:

Adults: 67
Juveniles:
Eggs: 1
Chicks: Yes

SUBSTRATE:

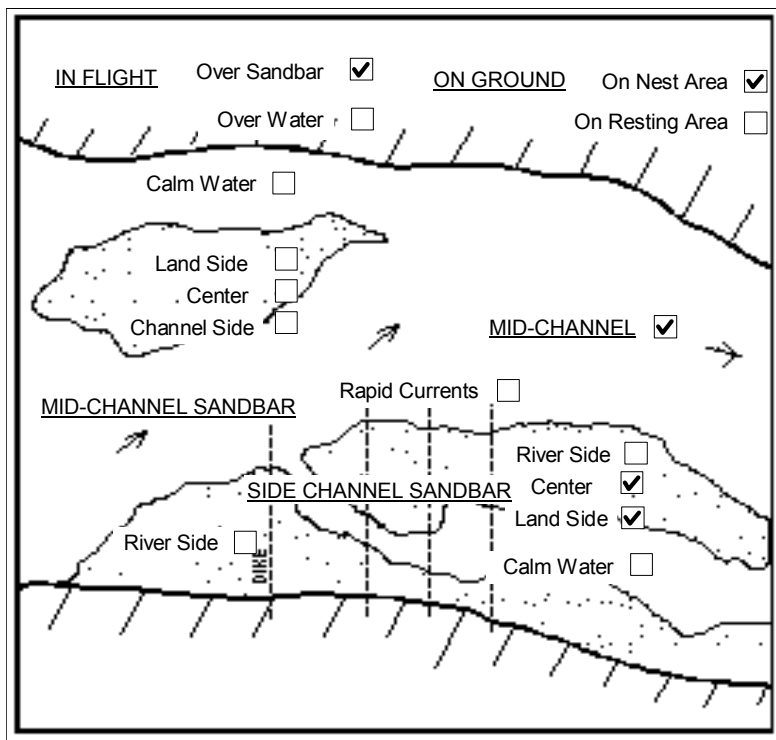
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 79 °F
Rain: No
Wind: 5 mph
% Cloud: 95



OTHER NOTES:

Right Bank. Flush count along upstream attached point of Middle Ground Island, mid height bar (8ft.) with canine tracks and 2 chicks, 1 week old. Six terns tending scrapes. Many Cliff Swallows also present.

LA side

OBSERVERS: Boyds, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Vicksburg = 19.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 10:02 RIVER MILE 393

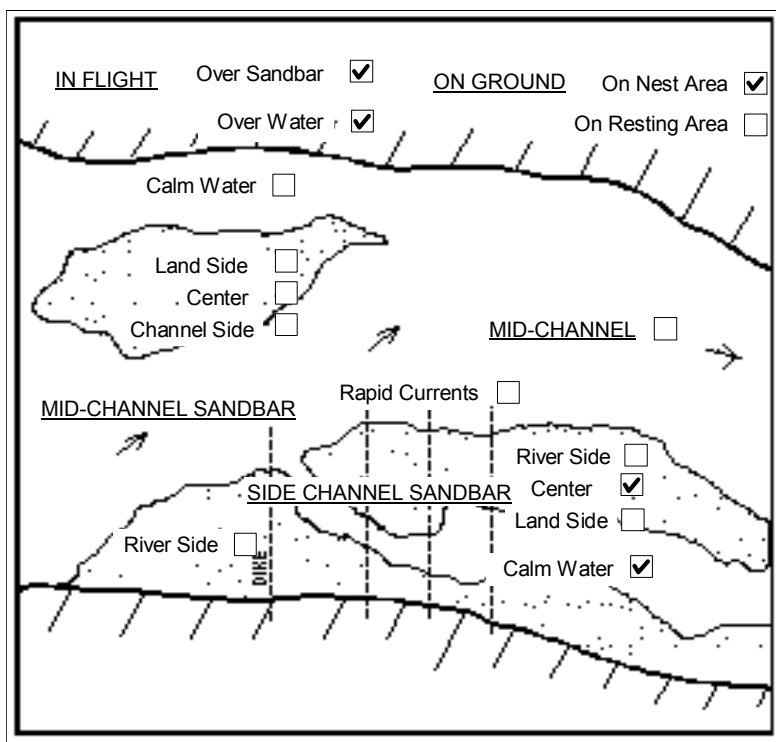
LOCALITY: Tensas LA SITE NAME: Bondurant Towhead Dikes
County/Parish State

WHERE SITED: Latitude: 31.89713
Longitude: 91.21048

Approximate Distance to Water: 400 Feet

NUMBERS SIGHTED:

Adults: 150
Juveniles:
Eggs: 2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 2000 Feet

FIELD CONDITION:

Temperature: 82 °F
Rain: No
Wind: 5 mph
% Cloud: 65

OTHER NOTES:

Right Bank. Flush count on undulating, gently sloping sand bar on upstream side of wooded island up to 10 ft. elevation. Bar extends 1 mile x 3/4 mile. Six active scrapes with human tracks, Great Blue Heron tracks present. Light mobbing of observers.

LA side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 10:15 RIVER MILE 390

LOCALITY: Tensas LA SITE NAME: Browns Field Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 2

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: 0 Feet

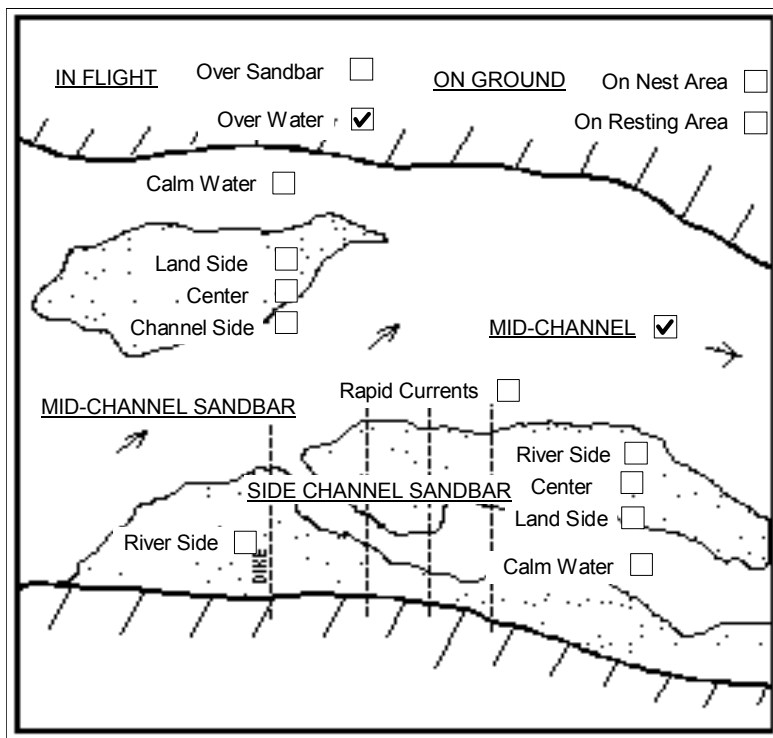
FIELD CONDITION:

Temperature: 86 °F

Rain: No

Wind: 5 mph

% Cloud: 90



OTHER NOTES:

Two terns flying mid-channel.

LA side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING
DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 10:52 RIVER MILE 383.2

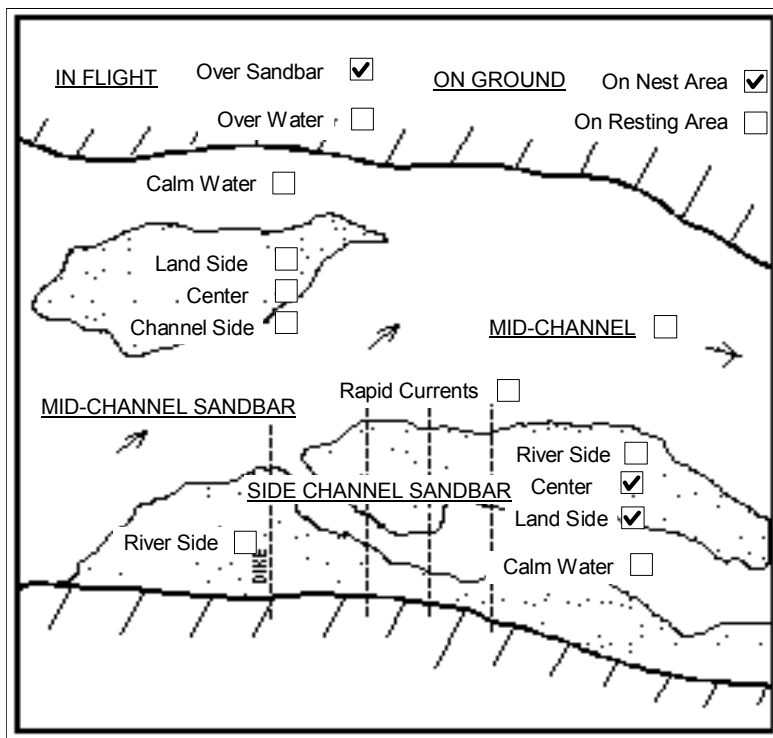
LOCALITY: Jefferson MS SITE NAME: Below Spithead Towhead Dikes
County/Parish State

WHERE SITED: Latitude: 31.82997
Longitude: 91.34646

Approximate Distance to Water: 80 Feet

NUMBERS SIGHTED:

Adults: 50
Juveniles:
Eggs: 2
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 2000 Feet

FIELD CONDITION:

Temperature: 86 °F
Rain: No
Wind: 10 mph
% Cloud: 90

OTHER NOTES:

Left Bank. Flush count along undulating, gently sloping, 8 ft. high sand bar with small patches of willows on upstream end. One tern sitting on a scrape. Colony (1 x 1/4 mile) located on downstream end of island and is unattached.

MS side

OBSERVERS: Boyds, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 11:10 RIVER MILE 378

LOCALITY: Tensas LA SITE NAME: Water Proof Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 7

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

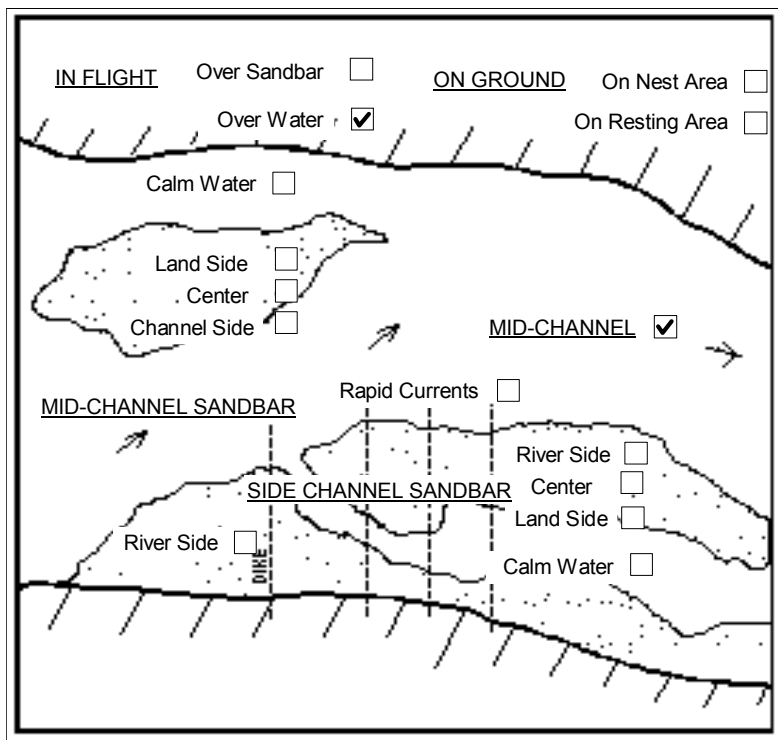
FIELD CONDITION:

Temperature: 86 °F

Rain: No

Wind: 10 mph

% Cloud: 90



OTHER NOTES:

Seven terns flying mid -channel.

LA side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 13:30 RIVER MILE 357.4

LOCALITY: Adams MS SITE NAME: Carthage Point Dikes
County/Parish State

WHERE SITED: Latitude: 31.51478
Longitude: 91.49639

Approximate Distance to Water: _____ Feet

NUMBERS SIGHTED:

Adults: 43
Juveniles: _____
Eggs: _____
Chicks: No

SUBSTRATE:

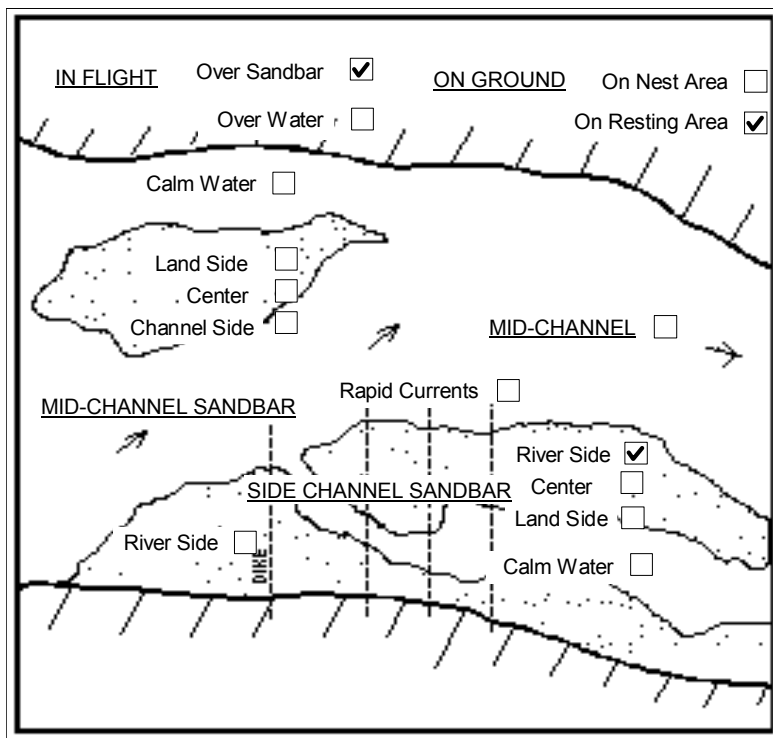
Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 2000 Feet

FIELD CONDITION:

Temperature: 90 °F
Rain: No
Wind: 5 mph
% Cloud: 100



OTHER NOTES:

Left Bank. Attempted flush count at head of island, attached sand and gravel bar, but all birds resting at the waterline. No signs of reproduction.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 14:00 RIVER MILE 349.6

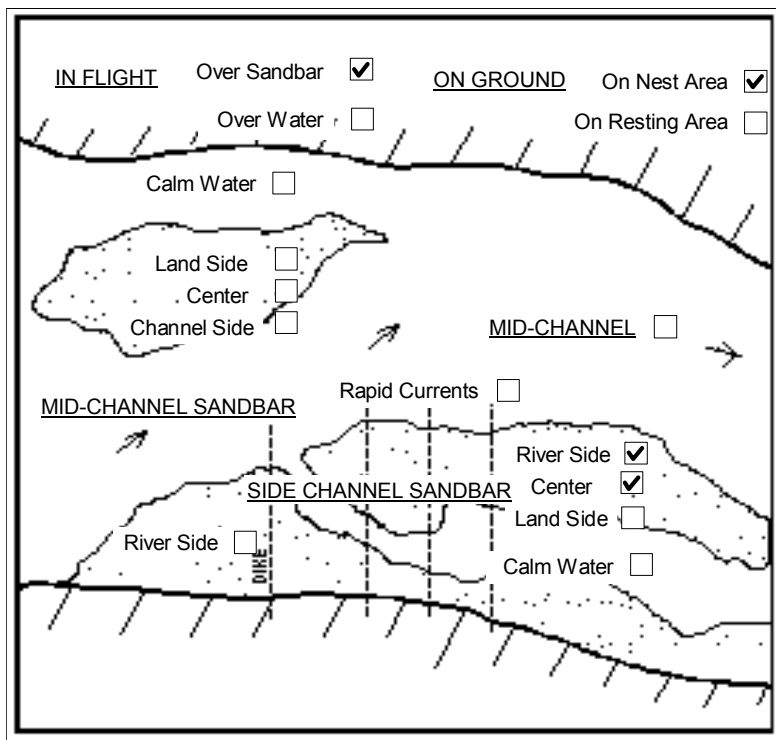
LOCALITY: Adams MS SITE NAME: Opposite Warnicott Landing Dikes
County/Parish State

WHERE SITED: Latitude: 31.41997
Longitude: 91.49334

Approximate Distance to Water: 300 Feet

NUMBERS SIGHTED:

Adults: 105
Juveniles:
Eggs: 1,2,3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows/Cottonwoods
Distance: 150 Feet

FIELD CONDITION:

Temperature: 88 °F
Rain: No
Wind: 5 mph
% Cloud: 100

OTHER NOTES:

Left Bank. Flush count on sandbars between dikes with some patches of dead willows throughout and live, large willows and cottonwoods at downstream end. Nests surprisingly close to trees and each other (15 ft.).

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 14:30 RIVER MILE 337

LOCALITY: Adams MS SITE NAME: Fritz Island Dikes
County/Parish State

WHERE SITED: Latitude: NA
Longitude: NA

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 2

Juveniles:

Eggs:

Chicks: No

SUBSTRATE:

Sand: ☐

Gravel: ☐

Debris: ☐

VEGETATION:

Type:

Distance: Feet

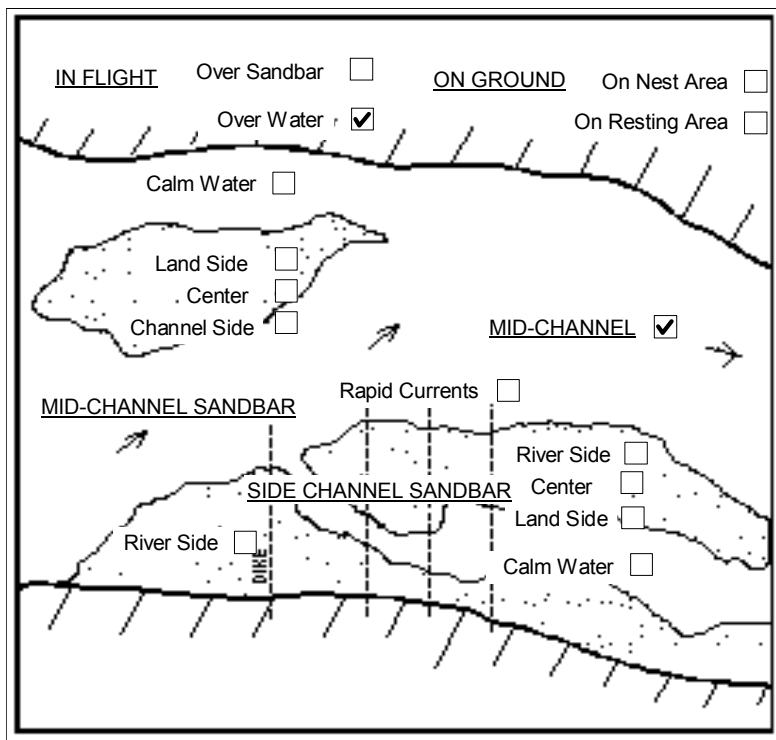
FIELD CONDITION:

Temperature: 88 °F

Rain: No

Wind: 5 mph

% Cloud: 100



OTHER NOTES:

Two terns flying mid-channel

LA side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 14:45 RIVER MILE 329.3

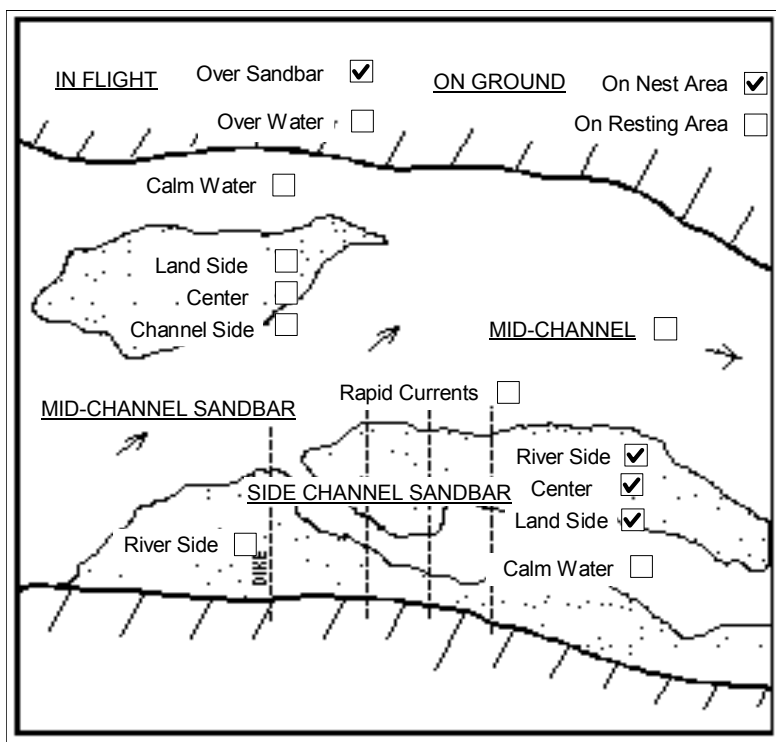
LOCALITY: Adams MS SITE NAME: Jackson Point
County/Parish State

WHERE SITED: Latitude: 31.24505
Longitude: 91.64962

Approximate Distance to Water: Feet

NUMBERS SIGHTED:

Adults: 130
Juveniles:
Eggs: 1
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type:
Distance: Feet

FIELD CONDITION:

Temperature: 87 °F
Rain: No
Wind: 5 mph
% Cloud: 95

OTHER NOTES:

Left Bank. Flush count on mid-channel, isolated point bar of clean, solid sand, 4 ft. vertical height, flat-topped, 0.75 mile x 300 ft. wide. Three nests observed.

MS side

OBSERVERS: Boyds, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 15:33 RIVER MILE 304.5

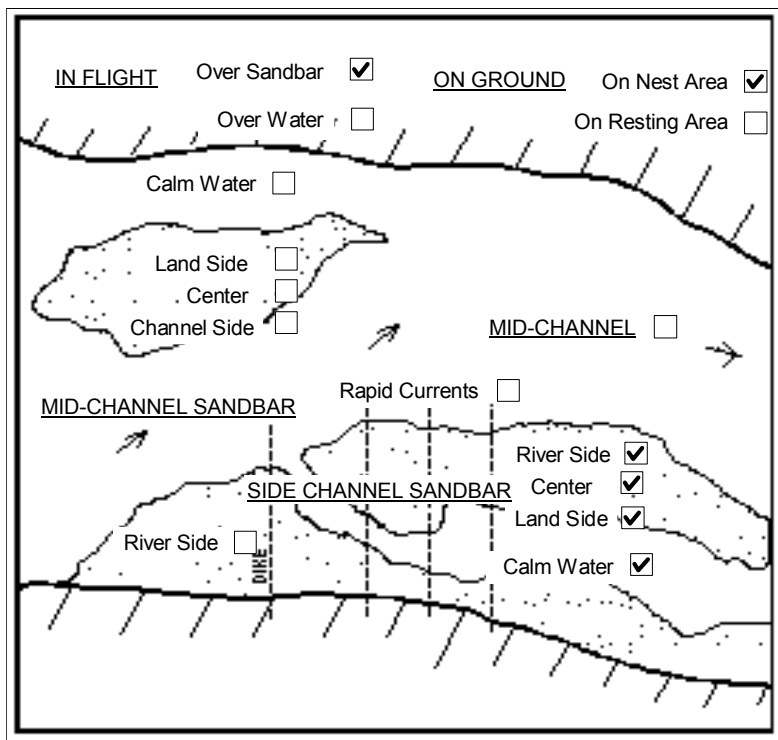
LOCALITY: West Feliciano LA SITE NAME: Shreves Bar
County/Parish State

WHERE SITED: Latitude: 30.99254
Longitude: 91.64989

Approximate Distance to Water: 500 Feet

NUMBERS SIGHTED:

Adults: 185
Juveniles:
Eggs: 3
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows/Cottonwoods
Distance: 300 Feet

FIELD CONDITION:

Temperature: 80 °F
Rain: No
Wind: 5 mph
% Cloud: 95

OTHER NOTES:

Left Bank. Flush count along unattached, upstream point of large island with bar gently sloping up to 10 ft. elevation (1/4 mile x 600 ft.). Terns feeding in back chute. One Caspian Tern, 4 Mississippi Kites being mobbed.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)

FIELD SIGHTING DATA SHEET

FLY ☐ BOAT ☒

SPECIES: Interior Least Tern (*Sterna antillarum athalassos*)

DATE: 7/17/2009 TIME OF DAY: 16:00 RIVER MILE 300.5

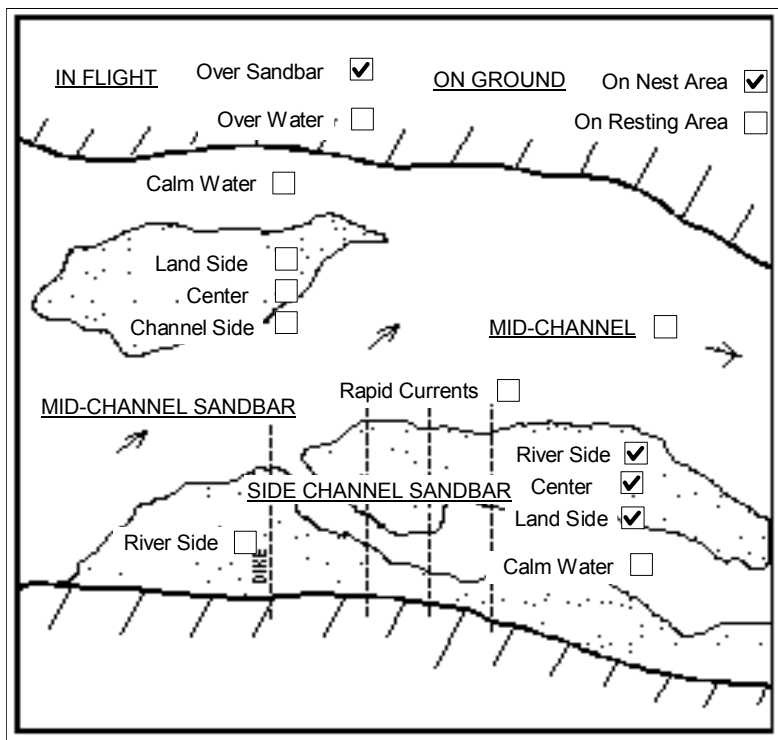
LOCALITY: Adams MS SITE NAME: Hog Point Dikes
County/Parish State

WHERE SITED: Latitude: 30.94092
Longitude: 91.65082

Approximate Distance to Water: 100 Feet

NUMBERS SIGHTED:

Adults: 167
Juveniles:
Eggs:
Chicks: No



SUBSTRATE:

Sand: ☒
Gravel: ☐
Debris: ☐

VEGETATION:

Type: Willows
Distance: 1000 Feet

FIELD CONDITION:

Temperature: 91 °F
Rain: No
Wind: 5 mph
% Cloud: 95

OTHER NOTES:

Right Bank. Perimeter count along flat-topped sand bar (1 mile x 1000 ft.) sloping up to 3 ft. elevation.
Five sitting on scrapes with 3 Caspian Terns and 1 Black Tern also present.

MS side

OBSERVERS: Boyd, Davin, Fowlkes, Grubaugh, Rumancik, Thron

RIVER GAGE READING: Natchez = 27.8 F
(Gage Location) (Elevation)